

YALE UNIVERSITY
LIBRARY



LIBRARY OF
THE SCHOOL OF
MEDICINE

Gift of
Dr. L. B. Mendel

INDEX TO THE MODERN HOSPITAL

Volume VII, July to December, Inclusive, 1916

GENERAL INDEX

A

Absorbo-Sheet, Norwich	435
Accidents and Immigrant Workmen	67
Accounting and Finances, Hospital	482
Address of President Winford H. Smith, M. D.	312
Address of the President of the Catholic Hospital Association	44
Adenoid Operations in New York City Hospitals and Dispensaries, Facilities and Procedure for Tonsil and	333
Adequate Institutional Care of the Tubercular	169
Adjustable Artificial Limbs	515
Administration Staff, Size of the	438
Administrative Medical Staff Problems	79
Admission of Charity Cases, Hospital	268
Admission of Mental Patients to State Institutions? What Constitutes the Ideal Method of	169
Admitting and Registering Dispensary Patients, Methods of	498
Advances in Nursing	244
Aftermath of the Ohio Convention	178
Aims of Industrial Welfare, The—Duncan	127
Alcoholics in the Modern Hospital, Care of—Towns	473
All-Metal Hot Water Bottle	183
All-White Kitchen, The	81
Aluminum Ware, Cleaning	52
Ambulance, The Trailer	242
Ambulances, Hints About Buying Motor	397
American Association for Study and Prevention of Infant Mortality	277
American Association of Industrial Physicians and Surgeons	123
American Hospital Association Gets Ready	40
American Hospital Association, Meeting of the	398
American Hospital Association Meeting at Philadelphia	224
American Hospital Association—Official Bulletin for December	480
American Hospital in Munich, The	168
Annual Report Should Be, What an	511
Annunziata in Naples, The Royal Institution of the	487
Another Doctor's Patient	513
Another Hospital Affected by Politics	287
Another Hospital in Politics	308
Anti-Tuberculosis Society at Hengelo, Day Sanatorium "Het Weust-hag" of the	488
Ants, Getting Rid of	326
Apology, An	132
Apparatus, Extension	182
Apparatus for Blood Transfusion, Simplified	76
Apparatus for Handling Helpless Invalids	183
Apparatus for the Determination of the Correct Specific Gravity of Urine, New	435
Apparatus, New Obesity	76
Apparatus, New Restraint	514
Apparatus, New X-Ray	78
Apparatus, Proctoclysis	267
Apparatus, Resuscitation	167
Architect, and the Engineer, the Owner, The—Goldschmidt	288
Army and Navy General Hospital at Hot Springs, Ark.—Special Correspondent	459
Army Hospital at San Francisco, The Letterman United States—Special Correspondent	190
Army Train for the Mexican Border, New—Grinnell	378
Army Wants More Nurses, United States	97
Arntzen Auxiliary Stretcher	353
Artificial Lighting of Hospitals, Principles of Daylight and—Knowles	22
Artificial Limbs, Adjustable	515
Artificially Colored Foods—Street	33
Aseptic Operating Room Possible? Is an	489
Associati, Address of the President of the Catholic Hospital	44
Associati, American Hospital—Official Bulletin for December	480
Associati, Development of the—Dr. Ross' Report	409
Association for Study and Prevention of Infant Mortality, American	277
Association Gets Ready, American Hospital	40
Association Meeting at Philadelphia, American Hospital	224
Association Meeting, Catholic Hospital	43
Association, Meeting of the American Hospital	398
Association Meeting, Ohio Hospital	41
Association of Industrial Physicians and Surgeons, American	123
At the Examination	269
Autopsies in Hospitals for the Insane	80
Autopsies in Small Hospitals	477
Auxiliary Stretcher, Arntzen	353
Average Cost of Hospitals and the Standards of Hospital Construction in Italy	416

B

Barrack Style, A Modern Pavilion Hospital on the	488
Base Hospitals, Red Cross Equips Two	269
Base Hospitals, Red Cross Organizes	90
Battle Creek Anniversary Pageant, Float of the	522
Battle Creek Has Semi-Centennial	271
Bedsore, How to Treat	440
Bedsore in the Hospital	517
Before and After—The Hospital	476
Best Part of the Program, The	308
Bethany Hospital, Kansas City, Kan., The New—Moulder	292

Beverages, Tasty Desserts and	256
"Big Brother" Movement, The	518
Blanket, Electric	267
Blind Soldiers in Milan, Care of	168
Blood Transfusion, Simplified Apparatus for	76
Boiled Milk, Raw Versus	415
Bookbinding Establishment, Welfare Work in a	122
Bottle, All-Metal Hot Water	183
Bread as Food, White	430
Bread Costs, Wheat Flour and	343
Bread, Vitamines and	241
British Hospitals, Indian "Caste" in	132
Brooklyn's Oldest Hospital Built New—Nealley, Hewlett	361
Buffalo City Hospital, First Units in the New—Green & Wicks	447
Building and Maintenance, Cost of	511
Bulletin for December of the American Hospital Association, Official	480
Business of a Modern Hospital, The	169
Butter, English Hospitals Recommend the Use of Margarine in Place of	324
Butter Versus Margarine	240

C

California Raises the Standard	495
Cancer, Hospitals and the Control of	520
Cancer Taking Form, Study of	387
Canned Fruits—Their Quality, Purity, and Price—Street	384
Canned Vegetables—Food Value and Trade Methods—Street	205
Care of Alcoholics in the Modern Hospital—Towns	473
Care of Blind Soldiers in Milan	168
Care of Its Indigent Sick and Injured, The Community's Obligation for the	49
Care of the Insane in Denmark, History of the	168
Care of the Sick at Dordrecht, The	52
Care of the Tubercular, Adequate Institutional	169
Carriages at Sea View and Greenpoint Hospitals, Food	78
Catholic Hospital Association, Address of the President of the	44
Catholic Hospital Association Meeting	43
Central Hebrew Hospital in Amsterdam, The	487
Change of Work, A	506
Charities and Corrections, Condensed Report of the Meeting of the National Conference of	71
Charity, A Notable and Unique	74
Charity Cases, Hospital Admission of	268
Charity, Efficient Organized	84
Chart, Convenient Diet	341
Chassis, Utility	515
Chef on Wholesome Meats, A	432
Chemical Composition of Commercial Glucose and Its Digestibility	506
Chemical Industry—The Need of Prophylaxis, Occupational Hazard in the	507
Chemical Laboratory, The Hospital	240
Child, The Hospital's Liability for a Patient's	414
Child Welfare, Plan Work for	442
Child Welfare, Work for	396
Children, Conditions of the Hospitalization of	489
Children's Clinic of the Municipal Hospital at Amsterdam, The	489
Children's Hospitals in 1916, Convalescence Services in	487
Christiania Municipal Hospital for the Insane at Dikemark, Asker, The	240
Chutes, Laundry	268
Circulating Library, A Hospital	445
Citrus Fruits in the Hospital	503
City Hospital, First Units of the New Buffalo—Green & Wicks	447
Cleaner, New Sanitary Vacuum	351
Cleaning Aluminum Ware	52
Cleaning Silver by Contact with Aluminum in Alkaline Solution	294
Cleaning, Washing and	325
Cleanliness in the Hospital	85
Clinic Doctors, New York Seeking	472
Clinic in Groningen, The Psychiatric-Neurological	241
Clinic in Milan, The New Pediatric	324
Clinic in Utrecht, The Emma	241
Clinic of the Municipal Hospital at Amsterdam, The Children's	489
Clinical Teaching, The Municipal Hospital as a Factor in	324
Clinics and Their Definite Purpose, Mental	63
Clinics for Venereal Diseases—Why We Need Them—How to Develop Them	495
Cloak, Suit, Skirt, Dress, and Waist Industries—Price	111
College Nursing	488
Colored Foods, Artificially—Street	33
Commercial Glucose and Its Digestibility, Chemical Composition of	506
Community Hospital, II, The Small—Its Finances—Hornsby	18
Community Hospital, III, The Small—The Planning—Hornsby	202
Community Hospital, IV, The Small—Constructing the Building—Hornsby	295
Community Hospital, V, The Small—The Interior Arrangement—Hornsby	388
Community Hospital Service, Real	432
Community Hospital, The Small	479
Community's Obligation for the Care of Its Indigent Sick and Injured, The	49

Composite Appeal, The.....	176
Comprehensive Public Health Study.....	38
Condensed Report of the Meeting of the National Conference of Charities and Corrections.....	71
Conditions of the Hospitalization of Children.....	489
Conservation of the Health of Industrial Workers, The—Goldwater.....	124
Consumption, The Institutional Treatment of.....	169
Contagious Building, Memorial Hospital, New London, Conn., The— Burbury.....	306
Contagious Diseases in General Hospitals.....	268
Convalescence Services in Children's Hospitals in 1916.....	487
Convalescent Homes, Private.....	269
Convalescent Institution, The—Methods—Results—Brush.....	367
Convenient Diet Chart.....	341
Converter, Rieber Roentgen.....	516
Cooking Utensils, The Solution of Antimony from Enamel.....	241
Corn Syrup, The Decision in Regard to.....	291
Coroner's Office Obsolete? Is the.....	60
Corrective Work and Its Relation to the Nurse.....	55
Cost and Limits of Welfare Work.....	441
Cost of a New Hospital.....	354
Cost of Building and Maintenance.....	511
Cost of Hospitals and the Standards of Hospital Construction in Italy, Average.....	416
Cost, The Per Capita.....	355
County Hospital, Four Years of the Washington (Iowa)—Boice.....	456
County Hospitals, Iowa's.....	201
County Tuberculosis Hospital, Plans for a—Waterson, Sutton.....	466
Crime Cured by Surgery.....	414
Critical Analysis of Out-Patient Work from the Point of View of Efficiency, A.....	326
Crutch, Hipwood Pneumatic.....	514
Cultures Taken from Physicians' Thermometers, Report of Eighty- two.....	416
Cyanide Gas, Fumigation by.....	417

D

Day Sanatorium "Het Weusthag" of the Anti-Tuberculosis Society at Hengelo.....	488
Daylight and Artificial Lighting of Hospitals, Principles of—Knowles.....	22
Death of Dr. John B. Murphy.....	221
Death of Dr. Paul Paquin.....	127
Decision in Regard to Corn Syrup, The.....	291
Decorations in Hospitals, Interior.....	337
Denmark, History of the Care of the Insane in.....	168
Dental Treatment in Hospitals, The Value, Scope, and Expense of Routine.....	442
Department of Nursing and Social Service of the Washington Uni- versity of St. Louis.....	57
Department Store, Looking Beyond the Door of Welfare Service in the—Walker.....	119
Desserts and Beverages, Tasty.....	256
Diabetic Foods, Misbranding of.....	201
Diet Chart, Convenient.....	341
Dietetics, Interest in.....	253
Dietotherapy.....	52
Dietitian at Work in the Modern Industrial Plant, The.....	179
Dietitian, Training the Hospital.....	325
Diets in the Massachusetts General Hospital, The Preparation and Service of.....	67
Dim-a-Lite Rheostat.....	182
Disease, To Prevent and Cure Heart.....	357
Diseases, Clinics for Venereal—Why We Need Them—How to De- velop Them.....	495
Diseases in General Hospitals, Contagious.....	268
Diseases in Public Health Nursing, The Problem of Venereal.....	65
Diseases, Segregation for the Infectious.....	80
Disinfection and Other Practicable Methods of Preventing the Spread of Infection in Hospitals.....	316
Dispensaries and Their Relation to the Practicing Physician, The Massachusetts Tuberculosis.....	Oct. Adv. 46
Dispensaries, Facilities and Procedure for Tonsil and Adenoid Op- erations in New York City Hospitals and.....	333
Dispensaries Growing in the Southern States.....	427
Dispensaries in the Southern States.....	73
Dispensary a Paying Investment for Industry, The.....	175
Dispensary, Progress at the Hartford.....	73
Dispensary Progress in Chicago.....	498
Dispensary Rounders—Real and Imaginary.....	359
Dispensary, Standard for Determining the Suitability of Patients for Admission to a Free.....	325
Dispensary Work Should Stand For, What—Cabot.....	467
Doctors, New York Seeking Clinic.....	472
Doctor's Patient, Another.....	513
Dried Eggs, Frozen and.....	168
Dumbwaiters and Elevators for Hospitals.....	271
Dynamic Effect of Food.....	35

E

Eckman's New Field, Miss.....	432
Economical Living, Food Selection for Rational and.....	428, 503
Economical Treatment of the Tubercular Patients in the Temporary Hospitals.....	415
Economics in the Training School, Value of a Course in Household.....	491
Edible Pastes—Macaroni, Spaghetti, Vermicelli, Noodles—Street.....	463
Education, An Item in.....	36
Education of the Nurse, The.....	488
Education, Opinions on Sex.....	249
Efficiency Achieved at the Same Time, Welfare and—Walsh.....	115
Efficiency, Life Extension, Health and.....	60
Efficiency, What Is Meant by Hospital.....	53, 169
Efficient Heating for Institutional Groups—Baum.....	217
Efficient Organized Charity.....	84
Eggs, Frozen and Dried.....	168
Electric Blanket.....	267
Electric Incubators.....	352
Electric Steam Sterilizing, Instantaneous.....	436
Elevators for Hospitals, Dumbwaiters and.....	271
Emma Clinic in Utrecht, The.....	241

Employees Is Considered of Great Importance, Where Welfare of— Turpin.....	300
Employees, Systematic Health Service for—Frankel.....	87
Enamel Cooking Utensils, The Solution of Antimony from.....	241
Engineer, the Owner, the Architect, and the—Goldschmidt.....	288
English Hospitals Recommend the Use of Margarine in Place of Butter.....	324
Enlightened Medical Leadership.....	220
Entertainment for Workers.....	350
Equipment, Minimum Laboratory.....	517
Ethics in Schools of Nursing, Teaching of.....	492
Examination, At the.....	269
Examination, The Physical.....	74
Exercise, The Value of.....	340
Experiments with Rubber Gloves.....	240
Extension Apparatus.....	182
Eyestrain, Motion Pictures and.....	338

F

Facilities and Procedure for Tonsil and Adenoid Operations in New York City Hospitals and Dispensaries.....	333
Fahrenheit Thermometer Be Abolished? Shall the.....	325
Fakers in Tuberculosis Hospital.....	28
Fever Treated by Ordinance, Hay.....	35
Fifth Year, The Hospital or—Lewinsky-Corwin.....	392
Fiftieth Anniversary of the State Hospital for the Insane at Ebers- walde, The.....	241
Figures for Standardization.....	396
Finances, Hospital Accounting and.....	482
Financing of Hospitals, The.....	197
First Aid in the Hospital, Standardized.....	478
First Units of the New Buffalo City Hospital—Green & Wicks.....	447
Float of the Battle Creek Anniversary Pageant.....	522
Floating Hospital, New York Launches New.....	51
Flour, Wheat.....	69, 180
Flour and Bread Costs, Wheat.....	343
Flour and Other Flours, Wheat.....	254
Flours, Wheat Flour and Other.....	254
Following Up Infantile Paralysis.....	358
Food Carriages at Sea View and Greenpoint Hospitals.....	78
Food, Dynamic Effect of.....	35
Food in a Hospital, Sea Mussels as a.....	323
Food, Safeguarding the Hospital's Most Valuable—Milk—North.....	13
Food Selection for Rational and Economical Living.....	428, 503
Food Value and Trade Methods—Canned Vegetables—Street.....	205
Food, White Bread as.....	430
Foods, Artificially Colored—Street.....	33
Foods, Misbranding of Diabetic.....	201
For Hospital Standardization.....	481
Four Years of the Washington County (Iowa) Hospital—Boice.....	456
Fowler Position Attachment for Hospital Beds, Improved.....	351
French Military Hospitals, Mortality Among the Patients of the.....	52
French War Hospital, In a.....	207
Frozen and Dried Eggs.....	168
Fruits, Canned—Their Quality, Purity, and Price—Street.....	384
Fruits in the Hospital, Citrus.....	503
Fry Laboratory Glassware.....	266
Fumigation by Cyanide Gas.....	417
Fumigation Up Again.....	438
Function of the Observation Ward at the City Hospital, The.....	326
Function of the Pathological Laboratory in the State Hospital Ser- vice, The.....	416

G

Garibaldi Hospital at Melito, Calabria.....	487
Gas, Fumigation by Cyanide.....	417
Generator, Magnetic Wave.....	436
German Hospital Trains.....	52
Germany from 1888 to 1913, Hospital Development in.....	167
Germany, Salvansan Comes from.....	97
Getting Rid of Ants.....	326
Glassware, Fry Laboratory.....	266
Gloves, Experiments with Rubber.....	240
Gloves, Sterilization of Rubber.....	268
Gloves? Who Furnishes the.....	79
Glucose and Its Digestibility, Chemical Composition of Commercial.....	506
Gordon & Ferguson, St. Paul, Minn.....	434
Grading and Classification of Nurses.....	318
Grading of Nurses.....	310
Gravity of Urine, New Apparatus for the Determination of the Correct Specific.....	435
Great Britain, The Lighting of Hospitals in—Walker.....	469
Great Fund to Pennsylvania Hospital.....	393
Great Medical Center for Chicago.....	475
Growth, Indexes of Nutrition and.....	425

H

Habit, The Medicine.....	251
Hay Fever Treated by Ordinance.....	35
Health, and Efficiency, Life Extension.....	60
Health Factory, The Modern Hospital as a—Keppel.....	303
Health Insurance, Provision for Medical Care Under—Lambert.....	95
Health Insurance, To Study.....	54
Health Nursing at the New Orleans Convention, Report of the Proceedings of the National Organization for Public.....	55
Health of Industrial Workers, The Conservation of—Goldwater.....	124
Health Service for Employees, Systematic—Frankel.....	87
Health Service, Real Public.....	220
Health Study, Comprehensive Public.....	38
Heart Disease, To Prevent and Cure.....	357
Heater, Nylander Saline Solution.....	352
Heating for Institutional Groups, Efficient—Baum.....	217
Hebrew Hospital in Amsterdam, The Central.....	487
Hints About Buying Motor Ambulances.....	397
Hints, Hospital.....	242
Hipwood Pneumatic Crutch.....	514
History of the Care of the Insane in Denmark.....	168

Homeopathic Hospital, Robinson Memorial of the Massachusetts— Hill	4	Hospital Trains, German	52
Homes, Private Convalescent	269	Hospital, Wants Isolation in Small	440
Hospital Accounting and Finances	482	Hospital, Youngstown Sheet and Tube Company's—Kaylor	109
Hospital Admission of Charity Cases	268	Hospitals and Dispensaries, Facilities and Procedure for Tonsil and Adenoid Operations in New York	333
Hospital Affected by Politics, Another	287	Hospitals and the Control of Cancer	520
Hospital, A Much Superintended	418	Hospitals and the Standards of Hospital Construction in Italy, Average Cost of	416
Hospital and Office Scales	353	Hospitals, Autopsies in Small	477
Hospital and the Surgeon, The—Goldwater	273, 371	Hospitals Be Trained? How Shall the Superintendents of Small	419
Hospital as a Factor in Clinical Teaching, The Municipal	324	Hospitals, Contagious Diseases in General	268
Hospital as a Health Factory, The Modern—Keppel	303	Hospitals, Disinfection and Other Practicable Methods of Prevent- ing the Spread of Infection in	316
Hospital Assistance in Florence	325	Hospitals, Dumbwaiters and Elevators for	271
Hospital Association, Address of the President of the Catholic	44	Hospitals, Economical Treatment of the Tubercular Patients in the Temporary	415
Hospital Association Gets Ready, American	40	Hospitals for the Insane, Autopsies in	80
Hospital Association Meeting at Philadelphia, American	224	Hospitals, Food Carriages at Sea View and Greenpoint	78
Hospital Association Meeting, Catholic	43	Hospitals, Indian "Caste" in British	132
Hospital Association, Meeting of the American	398	Hospitals in Great Britain, The Lighting of—Walker	469
Hospital Association Meeting, Ohio	41	Hospitals, Interior Decorations in	337
Hospital at Hot Springs, Ark., Army and Navy General—Special Correspondent	459	Hospitals in the War Zone, Isolation	488
Hospital at La Panne, The Ocean	487	Hospitals in 1916, Convalescence Services in Children's	487
Hospital at Melito, Calabria, Garibaldi	487	Hospitals, Iowa's County	201
Hospital at San Francisco, The Letterman United States Army— Special Correspondent	190	Hospital's Liability for a Patient's Child, The	414
Hospital, Aurora, Ill., The New General City—Jordan, Shepardon	213	Hospitals Meet, West Virginia	414
Hospital Beds, Improved Fowler Position Attachment for	351	Hospitals, Mortality Among the Patients of the French Military	52
Hospital, Bedsores in the	517	Hospital's Most Valuable Food—Milk, Safeguarding the—North	13
Hospital Built New, Brooklyn's Oldest—Neale, Hewlett	361	Hospital's Obligation to Every Patient Who Enters the Institution, The	319
Hospital Buy Power or Install a Plant? Should the—Sutton	31	Hospitals of Vienna, The War	53
Hospital, Care of Alcoholics in the Modern—Towns	473	Hospitals, Plumbing and Hot Water Systems for—Sutton	196
Hospital Circulating Library, A	445	Hospitals, Principles of Daylight and Artificial Lighting of—Knowles	22
Hospital, Citrus Fruits in the	503	Hospitals, Purchasing Textiles for	465
Hospital, Cleanliness in the	85	Hospitals Recommend the Use of Margarine in Place of Butter, English	324
Hospital Clinical Laboratory, The	240	Hospitals, Red Cross Equips Two Base	269
Hospital Construction in Italy, Average Cost of Hospitals and the Standards of	416	Hospitals, Red Cross Organizes Base	90
Hospital, Cost of a New	354	Hospitals, Sane Persons in Insane	51
Hospital Development in Germany from 1888 to 1913	167	Hospitals, Sea Mussels as a Food in	323
Hospital Dietitian, Training the	325	Hospitals, Silence Zones for Boston	12
Hospital Efficiency, What Is Meant by	53, 169	Hospitals, The Financing of	197
Hospital Experience with an Open-air Hall	488	Hospitals, The Location of	169
Hospital, Fake in Tuberculosis	28	Hospitals, The Mobile Surgical	415
Hospital, First Unit of the New Buffalo City—Green & Wicks	447	Hospitals, The Pennsylvania Workmen's Compensation Act as It Affects	242
Hospital for the Insane at Dikemark, Asker, The Christiania Municipal	240	Hospitals, The Small—At Philadelphia	395
Hospital for the Insane at Eberswalde, The Fiftieth Anniversary of the State	241	Hospitals, The Value, Scope, and Expense of Routine Dental Treat- ment in	442
Hospital for Women, New York City, The Ward Patient at Sloane— Hutchison	210	Hospitals, Would Standardize	472
Hospital, Four Years of the Washington County (Iowa)—Boice	456	Hotel Dieu de Saint Joseph, Montreal—Styles	310
Hospital, Great Fund to Pennsylvania	393	Hot Water Bottle, All-Metal	183
Hospital Hints	242	Hot Water Systems, Plumbing and, for Hospitals—Sutton	196
Hospitalization at Leysin of Indigent Citizens of Vaud Affected with Surgical Tuberculosis	324	Household Economics in the Training School, Value of a Course in	491
Hospitalization for Tuberculous Soldiers, The	487	How Shall the Superintendents of Small Hospitals Be Trained?	419
Hospitalization of Children, Conditions of the	489	How to Calculate Syrup Density	323
Hospitalization of Prisoners of War Needing Climatic Treatment	167	How to Treat Bed Sores	440
Hospital, II, The Small Community—Its Finances—Hornsby	18	How We Kept the Kiddies Out of Danger	501
Hospital, III, The Small Community—The Planning—Hornsby	202	Hygiene, Industrial Welfare Work and Social	176
Hospital, IV, The Small Community—Constructing the Buildings— Hornsby	295	Hygiene, To Discuss Social	414
Hospital V, The Small Community—The Interior Arrangement— Hornsby	388		
Hospital, Illinois Central Railroad Opens New—Schmidt	98		
Hospital, In a French War	207		
Hospital in Amsterdam, The Central Hebrew	487		
Hospital in Amsterdam, The Portuguese-Hebrew	324		
Hospital in Munich, The American	168		
Hospital in Politics, Another	308		
Hospital Internship	326		
Hospital, In the	360		
Hospital, Kansas City, Kan., The New Bethany—Moulder	292		
Hospital, Lessons in the	17		
Hospital Liability	53		
Hospital, Nature, Value, and Necessity of Team-Work in a—Mayo	1		
Hospital Need Training for Mental Work? Why Does the Nurse in the General	329		
Hospital, New London, Conn., The Contagious Building, Memorial— Burby	306		
Hospital, New York Launches New Floating	51		
Hospital of the French Cities in Milan, The	324		
Hospital on the Barrack Style, A Modern Pavilion	488		
Hospital or Fifth Year, The—Lewinsky-Corwin	392		
Hospital Organization, The	439		
Hospital Planned Large, Built Small, Queensborough	382		
Hospital, Plans for a County Tuberculosis—Watterson, Sutton	466		
Hospital, Plans for a Small	80		
Hospital, Private Room Building of the Robert Packer—Waltz, Guthrie	198		
Hospital Records, Proposed Numerical System of—Miller	185		
Hospital, Robinson Memorial of the Massachusetts Homeopathic— Hill	4		
Hospital Section Had No Program	40		
Hospital Service, Real Community	432		
Hospital Service, The Function of the Pathological Laboratory in the State	416		
Hospital Service, The Newer	479		
Hospital Ship, The World's First	415		
Hospital, Social Service at the Massachusetts General	168		
Hospital Standardization, For	481		
Hospital, Standardized First Aid in the	478		
Hospital, The—Before and After	476		
Hospital, The Business of a Modern	169		
Hospital, The Function of the Observation Ward at the City	326		
Hospital, The Leveling Process in the	83		
Hospital, The Open—A Factor in Preventive Medicine	411		
Hospital, The Preparation and Service of Diets in the Massachu- setts General	67		
Hospital, The Small Community	479		
Hospital, The War's Effect on the Special	52		
		Ice Cream Making Regulated	212
		Illinois Central Railroad Opens New Hospital—Schmidt	98
		Illumination, Operating Room	168
		Improved Fowler Position Attachment for Hospital Beds	351
		In a French War Hospital	207
		Incubators, Electric	352
		Indexes of Nutrition and Growth	425
		Indian "Caste" in British Hospitals	132
		Industrial Physicians and Surgeons, American Association of	123
		Industrial Plant, The Dietitian at Work in the Modern	179
		Industrial Welfare—A New Department	128
		Industrial Welfare—A Special Number	36
		Industrial Welfare Number, The	223
		Industrial Welfare Problems	263
		Industrial Welfare The Aims of—Duncan	127
		Industrial Welfare Work a Factor in Modern Management—Eaton	104
		Industrial Welfare Work and Social Hygiene	176
		Industrial Welfare Work—Boiled Down	129
		Industrial Workers, The Conservation of the Health of—Goldwater	124
		Industries, Cloak, Suit, Skirt, Dress, and Waist—Price	111
		Industry, The Dispensary a Paying Investment for	175
		Industry, The Visiting Nurse in—Foley	125
		Industry, The Working Out of a New Idea in	174
		Infant Mortality, American Association for Study and Preven- tion of	277
		Infantile Paralysis, Following Up	358
		Infectious Diseases, Segregation for the	80
		Injury to a Patient, Liability for	291
		Insane Aliens Let Loose	83
		Insane at Dikemark, Asker, The Christiania Municipal Hospital for the	240
		Insane, Autopsies in Hospitals for the	80
		Insane Have Unique Periodical	272
		Insane Hospitals, Sane Persons in	51
		Insane in Denmark, History of the Care of the	168
		Insane Patients, Sexual Armor for Prevention of Self-Abuse by	437
		Instantaneous Electric Steam Sterilizing	436
		Institution Kitchen Problems, Some	342
		Institution, The Convalescent—Methods—Results—Brush	367
		Institutional Care of the Tubercular, Adequate	169
		Institutional Groups, Efficient Heating for—Baum	217
		Institutional Treatment of Consumption, The	169
		Insurance, Provision for Medical Care Under Health—Lambert	95
		Insurance, To Study Health	54
		Interest in Dietetics	253
		Interior Decorations in Hospitals	337
		Internship, Hospital	326
		In the Hospital	360

Invalids, Apparatus for Handling Helpless.....	183
Iowa's County Hospitals.....	201
Iron and Steel Industry, Present Scope of Welfare Work in the— Darlington	91
Is an Aseptic Operating Room Possible?.....	489
Isolation Hospitals in the War Zone.....	488
Isolation in Small Hospital, Wants.....	440
Is the Coroner's Office Obsolete?.....	60
Italy, Average Cost of Hospitals and the Standards of Hospital Construction in	416
Item in Education, An.....	36

K

Kitchen Problems, Some Institution.....	342
Kitchen, The All-White.....	81
Knife with Detachable Blades, Operating.....	267
Kuttner-Leitz Microcolorimeter	437

L

Laboratory Equipment, Minimum.....	517
Laboratory Glassware, Fry	266
Laboratory in Its Relation to the Purchase of Supplies, The.....	417
Laboratory in the State Hospital Service, The Function of the Pathological	416
Laboratory, The Hospital Chemical.....	240
Langworthy's Helpful Paper, Dr.....	428
Laundry Chutes	268
Lessons in the Hospital.....	17
Letterman United States Army Hospital at San Francisco, The— Special Correspondent	190
Leveling Process in the Hospital, The.....	83
Liability for a Patient's Child, The Hospital's.....	414
Liability for Injury to a Patient.....	291
Liability, Hospital	53
Library, A Hospital Circulating.....	445
Life Extension, Health, and Efficiency.....	60
Lighting of Hospitals in Great Britain, The—Walker.....	469
Lighting of Hospitals, Principles of Daylight and Artificial—Knowles ..	22
Limbs, Adjustable Artificial.....	615
Living, Food Selection for Rational and Economical.....	428, 503
Location of Hospitals, The.....	169
Logical Annual Report, A.....	309
Looking Beyond the Door of Welfare Service in the Department Store—Walker	119
Louis R. Curtis Makes a Change.....	522

M

Magnetic Wave Generator.....	436
Maintenance, Cost of Building and.....	511
Margaret Teresa O'Donovan, Nurse.....	479
Margarine, Butter Versus.....	240
Margarine in Place of Butter, English Hospitals Recommend the Use of	324
Massachusetts General Hospital, Social Service at the.....	168
Massachusetts Homeopathic Hospital, Robinson Memorial of the— Hill	4
Massachusetts Tuberculosis Dispensaries and Their Relation to the Practicing Physician, The.....	Oct. adv. 46
Meats, A Chef on Wholesome.....	432
Mechanotherapy, The F. Ponti Pavilion of.....	416
Medical and Social Service Department, The Value of Employees— McCleery	208
Medical Care Under Health Insurance, Provision for—Lambert.....	95
Medical Center for Chicago, Great.....	475
Medical Leadership, Enlightened	220
Medical Profession's Obligation to the Patient, The—Christian.....	9
Medical Staff Problems, Administrative.....	79
Medicine Habit, The.....	251
Meeting at Philadelphia, American Hospital Association.....	224
Meeting, Catholic Hospital Association.....	43
Meeting of the American Hospital Association.....	398
Meeting of the National Conference of Charities and Corrections, Condensed Report of the.....	71
Meeting, Ohio Hospital Association.....	41
Meeting, Safety Council Has a Banner.....	424
Meeting, The Philadelphia	221, 394
Meeting, The Recent Cornell.....	253
Meetings, Philadelphia Convention Surpasses all Previous.....	398
Mental Clinics and Their Definite Purpose.....	63
Mental Patients to State Institutions? What Constitutes the Ideal Method for the Admission of.....	169
Mental Work? Why Does the Nurse in the General Hospital Need Training for	329
Merck & Co., New York City.....	434
Methods of Admitting and Registering Dispensary Patients.....	498
Metropolitan Life Insurance Company Tuberculosis Sanatorium— Waid	278
Microcolorimeter, Kuttner-Leitz	437
Milan, Care of Blind Soldiers in	168
Military Hospitals, Mortality Among the Patients of the French.....	52
Milk Causes Scurvy, Pasteurized.....	3
Milk, Raw Versus Boiled.....	415
Milk, Safeguarding the Hospital's Most Valuable Food—North.....	13
Minimum Laboratory Equipment.....	517
Misbranding of Diabetic Foods.....	201
Mobile Surgical Hospitals, The.....	415
Modern Hospital as a Health Factory, The—Keppel.....	303
Modern Hospital, The Business of a	169
Modern Pavilion Hospital on the Barrack Style, A.....	488
Mortality, American Association for Study and Prevention of In- fant	277
Mortality Among the Patients of the French Military Hospitals.....	52
Motion Pictures and Eyestrain.....	338
Motor Ambulances, Hints About Buying.....	397
Movement, The "Big Brother".....	518
Much Superintended Hospital, A.....	418
Munich, The American Hospital in.....	168
Municipal Hospital as a Factor in Clinical Teaching, The.....	324
Municipal Hospital at Amsterdam, The Children's Clinic of the.....	489

Murphy, Death of Dr. John B.....	221
Mussels as a Food in Hospitals, Sea.....	323

N

National Safety Council, The—Babcock.....	477
Nature, Value, and Necessity of Team-Work in a Hospital—Mayo.....	1
Navy General Hospital at Hot Springs, Ark., Army and—Special Correspondent	459
Neurological Clinic in Groningen, The Psychiatric.....	241
New Apparatus for the Determination of the Correct Specific Grav- ity of Urine.....	435
New Army Train for the Mexican Border—Grinnell.....	378
New Bethany Hospital, Kansas City, Kan., The—Moulder.....	292
New Container for Surgical Suture Material.....	78
New Department, A—Industrial Welfare.....	128
New General City Hospital, Aurora, Ill., The—Jordan, Shephardson.....	213
New Hospital, Cost of a	354
New Obesity Apparatus.....	76
New Patriotism, The.....	171
New Pediatric Clinic in Milan, The.....	324
New Restraint Apparatus.....	514
New Sanitary Vacuum Cleaner.....	351
New Sink for Plaster Work.....	181
New Type of X-Ray Tube.....	435
New Visiting Nurse Plan.....	495
New X-Ray Apparatus.....	78
New York Launches New Floating Hospital.....	51
New York Seeking Clinic Doctors.....	472
Newer Hospital Service, The.....	479
Norwich Absorb-Sheet	435
Notable and Unique Charity, A.....	74
Numerical System of Hospital Records, Proposed—Miller.....	185
Nurse, Corrective Work and Its Relation to the.....	55
Nurse in Industry, The Visiting—Foley.....	125
Nurse in the General Hospital Need Training for Mental Work? Why Does the.....	329
Nurse, Margaret Teresa O'Donovan.....	479
Nurse Plan, New Visiting.....	495
Nurse Should Contribute to Team-Work, What a	171
Nurse, Some Educational Problems of Mutual Interest to the Phy- sician and the.....	244
Nurse, The Education of the.....	488
Nurse, Uniform for Wet.....	265
Nurse's Training, The Place of Tuberculosis Work in a	422
Nurses and Rubber Runners.....	354
Nurses as a Social Center, The Training School for.....	328
Nurses as Missionaries, Physicians and.....	426
Nurses, Grading and Classification of.....	318
Nurses, Grading of	310
Nurses, Standardization of State Requirements of Training Schools for	324
Nurses, United States Army Wants More.....	97
Nursing, Advances in	244
Nursing and Social Service of the Washington University, St. Louis, Department of	57
Nursing at the New Orleans Convention, Report of the Proceedings of the National Organization for Public Health.....	55
Nursing, College	488
Nursing, Teaching of Ethics in Schools of.....	492
Nursing, The Problem of Venereal Diseases in Public Health.....	65
Nutritional Guidance	63
Nutrition and Growth, Indexes of.....	425
Nylander Saline Solution Heater.....	352

O

Obesity Apparatus, New.....	76
Observation Ward at the City Hospital, The Function of the.....	326
Occupational Hazard in the Chemical Industry—The Need for Prophylaxis	507
Ocean Hospital at La Panne, The.....	487
Official Bulletin for December of the American Hospital Association.....	480
Ohio Convention, Aftermath of the.....	178
Ohio Hospital Association Meeting.....	41
Open-air Hall, Hospital Experience with an.....	488
Open Hospital, The—A Factor in Preventive Medicine.....	411
Operating Knife with Detachable Blades.....	267
Operating Room Illumination.....	168
Operating Room Possible? Is an Aseptic.....	489
Operating Room, Revolving	264
Operation, The Preparation of the Patient for.....	242
Opinions on Sex Education.....	249
Organization, The Hospital.....	439
Out-Patient Work from the Point of View of Efficiency, A Critical Analysis of	326
Owner, the Architect, and the Engineer, The—Goldschmidt.....	288

P

Paquin, Death of Dr. Paul.....	127
Paralysis, Following Up Infantile.....	358
Partnership X-Ray Department.....	512
Pastes, Edible—Macaroni, Spaghetti, Vermicelli, Noodles—Street.....	463
Pasteurized Milk Causes Scurvy.....	3
Pathological Laboratory in the State Hospital Service, The Function of the.....	416
Patient, Another Doctor's.....	513
Patient for Operation, The Preparation of the.....	242
Patient, Liability for Injury to a	291
Patient Should Contribute to the Team-Work, What the.....	48
Patient, The Medical Profession's Obligation to the—Christian.....	9
Patient, The Ward, at Sloane Hospital for Women, New York City— Hutchison	210
Patient Who Enters the Institution, The Hospital's Obligation to Every	319
Patients for Admission to a Free Dispensary, Standard for Deter- mining the Suitability of.....	325
Patients in the Temporary Hospitals, Economical Treatment of the Tubercular	415
Patients, Methods of Admitting and Registering Dispensary.....	498
Patients of the French Military Hospitals, Mortality Among the.....	52
Patients, Sexual Armor for Prevention of Self-Abuse by Insane.....	437
Patients to State Institutions? What Constitutes the Ideal Method for the Admission of Mental.....	169

Patient's Child, The Hospital's Liability for a.....	414
Patriotism, The New.....	171
Pavilion Hospital on the Barrack Style, A Modern.....	488
Pediatric Clinic in Milan, The New.....	324
Pennsylvania Hospital, Great Fund to.....	398
Pennsylvania Workmen's Compensation Act as It Affects Hospitals, The.....	242
People's Sanatorium Umberto I. at Prasomaso, The.....	240
Per Capita Cost, The.....	355
Philadelphia Meeting, The.....	221
Physical Examination, The.....	74
Physician and the Nurse, Some Educational Problems of Mutual Interest to the.....	244
Physician Should Contribute to the Team-Work, What the.....	46
Physician, The Massachusetts Tuberculosis Dispensaries and Their Relation to the Practicing.....	Oct. adv. 46
Physicians and Nurses as Missionaries.....	426
Physicians and Surgeons, American Association of Industrial.....	123
Physicians' Clinical Thermometers, Report of Eighty-two Cultures Taken from.....	416
Philadelphia Convention Surpasses all Previous Meetings.....	398
Philadelphia Meeting, The.....	394
Place of Tuberculosis Work in a Nurse's Training, The.....	422
Plan Work for Child Welfare.....	442
Plans for a County Tuberculosis Hospital—Watterson, Sutton.....	466
Plans for a Small Hospital.....	80
Plaster Work, New Sink for.....	181
Plumbing and Hot Water Systems for Hospitals—Sutton.....	196
Pneumatic Crutch, Hipwood.....	514
Politics, Another Hospital Affected by.....	287
Ponti Pavilion of Mechanotherapy, The F.....	416
Porter's Beer Is Gone, The.....	252
Portuguese-Hebrew Hospital in Amsterdam, The.....	324
Power, Should the Hospital Buy, or Install a Plant?—Sutton.....	31
Preparation and Service of Diets in the Massachusetts General Hospital, The.....	67
Preparation of the Patient for Operation, The.....	242
Prepared Vaginal Tampon.....	351
Present Scope of Welfare Work in the Iron and Steel Industry—Darlington.....	91
Prevent and Cure Heart Disease, To.....	357
Preventive Medicine, The Open Hospital a Factor in.....	411
Principles of Daylight and Artificial Lighting of Hospitals—Knowles.....	22
Private Convalescent Homes.....	269
Private Room Building of the Robert Packer Hospital—Waltz, Guthrie.....	198
Problem of Venereal Diseases in Public Health Nursing, The.....	65
Problem of Tuberculosis Sanatoriums, The.....	415
Problems, Industrial Welfare.....	263
Problems of Mutual Interest to the Physician and the Nurse, Some Educational.....	244
Problems, Some Institution Kitchen.....	342
Proctoclysis Apparatus.....	267
Progress at the Hartford Dispensary.....	73
Proposed Numerical System of Hospital Records—Miller.....	185
Provision for Medical Care Under Health Insurance—Lambert.....	95
Psychiatric-Neurological Clinic in Groningen, The.....	241
Public Health Service, Real.....	220
Pupils, Selection of Training School.....	440
Purchasing Textiles for Hospitals.....	465

Q

Queensborough Hospital Planned Large, Built Small.....	382
--	-----

R

Rational and Economical Living, Food Selection for.....	428, 503
Raw Versus Boiled Milk.....	415
Real Community Hospital Service.....	432
Real Public Health Service.....	220
Recent Cornell Meeting, The.....	253
Records, Proposed Numerical System of Hospital—Miller.....	185
Red Cross Equips Two Base Hospitals.....	269
Red Cross Organizes Base Hospitals.....	90
Refrigerator? What Is a Good.....	241
Registering Dispensary Patients, Methods of Admitting and.....	498
Report of Eighty-two Cultures Taken from Physicians' Clinical Thermometers.....	416
Report of the Proceedings of the National Organization for Public Health Nursing at the New Orleans Convention.....	55
Responsibility for the Scientific Work.....	512
Responsibility, The Surgeon's.....	12
Restraint Apparatus, New.....	514
Resuscitation Apparatus.....	167
Revolving Operating Room.....	264
Rheostat, Dim-a-Lite.....	182
Rieber Roentgen Converter.....	516
Robert Packer Hospital, Private Room Building of the—Waltz, Guthrie.....	198
Robinson Memorial of the Massachusetts Homeopathic Hospital—Hill.....	4
Roentgen Converter, Rieber.....	516
Ross' Report, Dr.—Development of the Association.....	409
Rounders, Dispensary—Real and Imaginary.....	359
Royal Institution of the Annunziata in Naples, The.....	487
Rubber Gloves, Experiments with.....	240
Rubber Gloves, Sterilization of.....	268
Rubber Runners, Nurses and.....	354
Runners, Nurses and Rubber.....	354

S

Safeguarding the Hospital's Most Valuable Food—Milk—North.....	13
Safety Council Has a Banner Meeting.....	424
Safety Council, The National—Babcock.....	477
Saline Solution Heater, Nylander.....	352
Salvarsan Comes from Germany.....	97
Sanatorium a Tutor in the Art of Living for All Workers.....	178
Sanatorium, Metropolitan Life Insurance Company Tuberculosis—Waid.....	278
Sanatorium, Tuberculosis, Fort Lyon, Colo.; United States Navy—Special Correspondent.....	29
Sanatorium Umberto I. at Prasomaso, The People's.....	240
Sanatoriums in Bratsberg District, Tuberculosis.....	487

Sanatoriums, The Problem of Tuberculosis.....	415
Sane Persons in Insane Hospitals.....	51
Sanitary Vacuum Cleaner, New.....	351
Sanitary Waste Receptacle.....	514
Saxon Mills, Spartanburg, S. C.....	433
Scales, Hospital and Office.....	353
School, Value of a Course in Household Economics in the Training.....	491
Schools of Nursing, Teaching of Ethics in.....	492
Scientific Work, Responsibility for the.....	512
Scurvy, Pasteurized Milk Causes.....	3
Sea Mussels as a Food in Hospitals.....	323
Segregation for the Infectious Diseases.....	80
Selection of Training School Pupils.....	440
Self-Abuse by Insane Patients, Sexual Armor for Prevention of.....	437
Service, Real Community Hospital.....	432
Service, The Newer Hospital.....	479
Services in Children's Hospitals in 1916, Convalescence.....	487
Sex Education, Opinions on.....	249
Sexual Armor for Prevention of Self-Abuse by Insane Patients.....	437
Shadow Box for Use in Stereopticon Demonstrations in Amphitheaters and Rooms Which Cannot Be Darkened.....	266
Shall the Fahrenheit Thermometer Be Abolished?.....	325
Ship, The World's First Hospital.....	415
Should the Hospital Buy Power or Install a Plant?—Sutton.....	31
Sick at Dordrecht, The Care of the.....	52
Signal System, A Telegraphic.....	239
Silence Zones for Boston Hospitals.....	12
Silver by Contact with Aluminum in Alkaline Solution, Cleaning.....	294
Simmons Hardware Company, St. Louis, Mo.....	433
Simplified Apparatus for Blood Transfusion.....	76
Simplified Tonometer.....	182
Sink for Plaster Work, New.....	181
Size of the Administration Staff.....	438
Small Community Hospital, II, The—Its Finances—Hornsby.....	18
Small Community Hospital, III, The—The Planning—Hornsby.....	202
Small Community Hospital, IV, The—Constructing the Building—Hornsby.....	295
Small Community Hospital, V, The—The Interior Arrangement—Hornsby.....	388
Small Community Hospital, The.....	479
Small Hospitals, Autopsies in.....	477
Small Hospital, Plans for a.....	80
Small Hospital, Wants Isolation in.....	440
Small Hospitals Be Trained? How Shall the Superintendents of.....	419
Small Hospitals, The—At Philadelphia.....	395
Smith, M. D., Winford H., Address of President.....	312
Social Hygiene, Industrial Welfare Work and.....	176
Social Hygiene, To Discuss.....	414
Social Service at the Massachusetts General Hospital.....	168
Social Service Department, The Value of Medical and—McCleery.....	208
Social Service of the Washington University, St. Louis, Department of Nursing and.....	57
Soldiers, The Hospitalization of Tuberculous.....	487
Solution Heater, Nylander Saline.....	352
Solution of Antimony from Enamel Cooking Utensils, The.....	241
Some Educational Problems of Mutual Interest to the Physician and the Nurse.....	244
Some Institution Kitchen Problems.....	342
Sores, How to Treat Bed.....	440
Southern States, Dispensaries Growing in the.....	427
Specific Gravity of Urine, New Apparatus for the Determination of the Correct.....	435
Staff Problems, Administrative Medical.....	79
Staff, Size of the Administration.....	438
Standard, California Raises the.....	495
Standard for Determining the Suitability of Patients for Admission to a Free Dispensary.....	325
Standard, The Westfield.....	254
Standardization, Figures for.....	396
Standardization, For Hospital.....	481
Standardization of State Requirements of Training Schools for Nurses.....	324
Standardize Hospitals, Would.....	472
Standardized First Aid in the Hospital.....	478
Starching Methods in Use Today.....	82
Steam Sterilizing, Instantaneous Electric.....	436
Sterilization of Rubber Gloves.....	268
Sterilizing, Instantaneous Electric Steam.....	436
Stretcher, Arntzen Auxiliary.....	353
Strikes, Welfare Work and.....	263
Study Health Insurance, To.....	54
Study of Cancer Taking Form.....	387
Superintendent Hospital, A Much.....	418
Superintendents of Small Hospitals Be Trained? How Shall the.....	419
Supplies, The Laboratory in Its Relation to the Purchase of.....	417
Surgeon, The Hospital and the—Goldwater.....	273, 371
Surgeons, American Association of Industrial Physicians and.....	123
Surgeon's Responsibility, The.....	12
Surgery, Crime Cured by.....	414
Surgical Hospitals, The Mobile.....	415
Surgical Suture Material, New Container for.....	78
Surgical Tuberculosis, Hospitalization at Laysin of Indigent Citizens of Vaude Affected with.....	324
Suture Material, New Container for Surgical.....	78
Syrup Density, How to Calculate.....	323
Syrup, The Decision in Regard to Corn.....	291
Systematic Health Service for Employees—Frankel.....	87

T

Tampon, Prepared Vaginal.....	351
Tasty Desserts and Beverages.....	256
Teaching of Ethics in Schools of Nursing.....	492
Team-Work.....	37
Team-Work in a Hospital, Nature, Value, and Necessity of—Mayo.....	1
Team-Work, What a Nurse Should Contribute to the.....	171
Team-Work, What the Patient Should Contribute to the.....	48
Team-Work, What the Physician Should Contribute to the.....	46
Telegraphic Signal System, A.....	239
Textiles for Hospitals, Purchasing.....	465
Thermometer Be Abolished? Shall the Fahrenheit.....	325
Thermometers, Report of Eighty-two Cultures Taken from Physicians.....	416
To Discuss Social Hygiene.....	414

Tonometer, Simplified	182
Tonsil and Adenoid Operations in New York City Hospitals and Dispensaries, Facilities and Procedure for.....	333
Trailer Ambulance, The	242
Train for the Mexican Border, New Army—Grinnell.....	378
Training for Mental Work? Why Does the Nurse in the General Hospital Need	329
Training School for Nurses as a Social Center, The.....	328
Training School Pupils, Selection of.....	440
Training School, Value of a Course in Household Economics in the.....	491
Training Schools for Nurses, Standardization of State Requirements of	324
Training the Hospital Dietitian.....	325
Trains, German Hospital	52
Transfusion, Simplified Apparatus for Blood.....	76
Treatment of Consumption, The Institutional.....	169
Treatment of the Tubercular Patients in the Temporary Hospitals, Economical	415
Tube, New Type of X-Ray.....	435
Tubercular, Adequate Institutional Care of the.....	169
Tubercular Patients in the Temporary Hospitals, Economical Treat- ment of	415
Tuberculosis Dispensaries and Their Relation to the Practicing Physician, The Massachusetts	Oct. adv. 46
Tuberculosis Hospital, Fakery in	28
Tuberculosis, Hospital at Leysin of Indigent Citizens of Vaud Afflicted with Surgical.....	324
Tuberculosis Hospital, Plans for a County—Watterson, Sutton.....	466
Tuberculosis Sanatorium, Fort Lyon, Colo., United States Navy— Special Correspondent	29
Tuberculosis Sanatoriums in Bratsberg District.....	487
Tuberculosis Sanatorium, Metropolitan Life Insurance Company— Waid	278
Tuberculosis Sanatoriums, The Problem of.....	415
Tuberculous Soldiers, The Hospitalization of.....	487
Tuberculosis Work in a Nurse's Training, The Place of.....	422

U

Uniform for Wet Nurse.....	265
Union Malleable Iron Company, East Moline, Ill.....	511
United States Army Wants More Nurses.....	97
United States Navy Tuberculosis Sanatorium, Fort Lyon, Colo.— Special Correspondent	29
Urine, New Apparatus for the Determination of the Correct Specific Gravity of	435
Utility Chassis	515

V

Vacuum Cleaner, New Sanitary.....	351
Vaginal Tampon, Prepared	351
Value of Employees' Medical and Social Service Department, The— McCleery	208
Value of a Course in Household Economics in the Training School.....	491
Value of Exercise, The	340
Value, Scope and Expense of Routine Dental Treatment in Hospitals, The	442
Vegetables, Canned—Food Value and Trade Methods—Street.....	205
Veneral Diseases, Clinics for—Why We Need Them—How to De- velop Them	495
Veneral Diseases in Public Health Nursing, The Problem of.....	65
Vienna, The War Hospitals of.....	53
Visiting Nurse in Industry, The—Foley.....	125
Visiting Nurse Plan, New.....	495
Vitamines and Bread	241

W

Wants Isolation in Small Hospital.....	440
Ward Patient at Sloane Hospital for Women, New York City, The— Hutchison	210
War Hospital, In a French.....	207
War Hospitals of Vienna, The.....	53
War Needing Climatic Treatment, Hospitalization of Prisoners of.....	167
War Zone, Isolation Hospitals in the.....	488

War's Effect on the Special Hospital, The.....	52
Ware, Cleaning Aluminum	52
Washing and Cleaning.....	325
Washington University, St. Louis, Department of Nursing and Social Service of the	57
Waste Receptacle, Sanitary.....	514
Wave Generator, Magnetic	436
Welfare and Efficiency Achieved at the Same Time—Walsh.....	115
Welfare, Industrial—A New Department.....	128
Welfare, Industrial—A Special Number.....	36
Welfare Number, The Industrial.....	223
Welfare of Employees Is Considered of Great Importance, Where— Turpin	300
Welfare, Plan Work for Child.....	442
Welfare Problems, Industrial	263
Welfare Service in the Department Store, Looking Beyond the Door of—Walker	119
Welfare, The Aims of Industrial—Duncan.....	127
Welfare Work a Factor in Modern Management, Industrial—Eaton.....	104
Welfare Work and Social Hygiene, Industrial.....	176
Welfare Work and Strikes.....	263
Welfare Work, Cost and Limits of.....	441
Welfare, Work for Child.....	396
Welfare Work in a Bookbinding Establishment.....	122
Welfare Work, Industrial—Boiled Down.....	129
Welfare Work in the Iron and Steel Industry, Present Scope of the—Darlington	91
Welfare Work—The Working Out of a New Idea in Industry.....	174
Westfield, Standard, The.....	254
West Virginia Hospitals Meet.....	414
Wet Nurse, Uniform for.....	265
What a Nurse Should Contribute to the Team-Work.....	171
What an Annual Report Should Be.....	511
What Constitutes the Ideal Method for the Admission of Mental Patients to State Institutions.....	169
What Dispensary Work Should Stand For—Cabot.....	467
What Is a Good Refrigerator?.....	241
What Is Meant by Hospital Efficiency.....	153, 169
What the Patient Should Contribute to the Team-Work.....	48
What the Physician Should Contribute to the Team-Work.....	46
Wheat Flour	69, 180
Wheat Flour and Bread Costs	343
Wheat Flour and Other Flours	254
Where Welfare of Employees Is Considered of Great Importance— Turpin	300
White Bread as Food.....	430
Who Furnishes the Gloves?.....	79
Why Does the Nurse in the General Hospital Need Training for Mental Work?	329
Women, New York City, The Ward Patient at Sloane Hospital for— Hutchison	210
Work, Cost and Limits of Welfare.....	441
Work for Child Welfare.....	396
Work, Responsibility for the Scientific.....	512
Work Should Stand For, What Dispensary—Cabot.....	467
Workers, Entertainment for	350
Workmen, Accidents and Immigrant	67
Workmen's Compensation Act as It Affects Hospitals, The Pennsyl- vania	242
World's First Hospital Ship, The.....	415
Would Standardize Hospitals.....	472

X

X-Ray Apparatus, New	78
X-Ray Department, Partnership.....	512
X-Ray Tube, New Type of.....	435

Y

Youngstown Sheet and Tube Company's Hospital—Kaylor.....	109
--	-----

Z

Zones for Boston Hospitals, Silence.....	12
--	----

DEPARTMENT INDEX

ADMINISTRATION—

Convalescent Institution, The—Methods—Results—Brush.....	367
Efficient Heating for Institutional Groups—Baum.....	217
Four Years of the Washington County (Iowa) Hospital—Boice.....	456
Nature, Value, and Necessity of Team-Work in a Hospital— Mayo	1
Proposed Numerical System of Hospital Records—Miller.....	185
Value of Employees' Medical and Social Service Department, The—McCleery	208
What Dispensary Work Should Stand For—Cabot.....	467

ARCHITECTURE—

Army and Navy General Hospital at Hot Springs, Ark.—Special Correspondent	450
Brooklyn's Oldest Hospital Built Anew—Nealley, Hewlett.....	361
Contagious Building, Memorial Hospital, New London, Conn., The—Burby	306
First Units of the New Buffalo City Hospital—Green & Wicks.....	447
Illinois Central Railroad Opens New Hospital—Schmidt.....	98
Letterman United States Army Hospital at San Francisco— Special Correspondent.....	190
Metropolitan Life Insurance Company Tuberculosis Sanatorium— Howk, Waid.....	278
New General City Hospital, Aurora, Ill., The—Jordan, Shep- ardson	213
Owner, the Architect, and the Engineer, The—Goldschmidt.....	288
Plans for a County Tuberculosis Hospital—Watterson, Sutton.....	466
Plumbing and Hot Water Systems for Hospitals—Sutton.....	196
Principles of Daylight and Artificial Light of Hospitals—Knowles.....	22
Private Room Building of the Robert Packer Hospital—Waltz, Guthrie	198

ARCHITECTURE—Continued.

Robinson Memorial of the Massachusetts Homeopathic Hospital —Hill	4
Should the Hospital Buy Power or Install a Plant?—Sutton.....	31
Small Community Hospital, II, The—Its Finances—Hornsby.....	18
Small Community Hospital, III, The—The Planning—Hornsby.....	202
Small Community Hospital, IV, The—Constructing the Building —Hornsby	295
Small Community Hospital, V, The—The Interior Arrangement —Hornsby	388
United States Navy Tuberculosis Sanatorium, Fort Lyon, Colo.— Special Correspondent.....	29
Youngstown Sheet and Tube Company's Hospital—Kaylor.....	109

CONTRIBUTORS—

Babcock, W. L.—The National Safety Council.....	477
Baum, M. E., Albert L.—Efficient Heating for Institutional Groups	217
Boice, M. D., C. A.—Four Years of the Washington County (Iowa) Hospital.....	456
Brush, M. D., Frederic—The Convalescent Institution—Meth- ods—Results	367
Burby, R. N., Nelly R.—The Contagious Building, Memorial Hospital, New London, Conn.....	306
Cabot, M. D., Richard C.—What Dispensary Work Should Stand For	467
Christian, M. D., Henry A.—The Medical Profession's Obliga- tion to the Patient.....	9
Darlington, M. D., Thomas—Present Scope of Welfare Work in the Iron and Steel Industry.....	91
Duncan, James P.—The Aims of Industrial Welfare.....	127

CONTRIBUTORS—Continued.

Eaton, J. M.—Industrial Welfare Work a Factor in Modern Management	104
Foley, Edna L.—The Visiting Nurse in Industry.....	125
Frankel, Ph. D., Lee K.—Systematic Health Service for Employees	88
Goldschmidt, Otto E.—The Owner, the Architect, and the Engineer	288
Goldwater, M. D., S. S.—The Conservation of the Health of Industrial Workers	124
Goldwater, M. D., S. S.—The Hospital and the Surgeon.....	274, 371
Green & Wicks—First Units of the New Buffalo City Hospital.....	447
Grinnell, Allan G.—New Army Train for the Mexican Border.....	378
Guthrie, M. D., Donald—Private Room Building of the Robert Packer Hospital.....	198
Hewlett, J. Monroe—Brooklyn's Oldest Hospital Built Anew.....	361
Hill, Warren O.—Robinson Memorial of the Massachusetts Homeopathic Hospital	4
Hornsby, M. D., John Allan—The Small Community Hospital, II—Its Finances	18
Hornsby, M. D., John Allan—The Small Community Hospital, III—The Planning	202
Hornsby, M. D., John Allan—The Small Community Hospital, IV—Constructing the Building.....	295
Hornsby, M. D., John Allan—The Small Community Hospital, V—The Interior Arrangement.....	388
Howk, M. D., H. J.—Metropolitan Life Insurance Company Tuberculosis Sanatorium.....	278
Hutchison, Mary E.—The Ward Patient at Sloane Hospital for Women, New York City.....	210
Jordan, Nettie B.—The New General City Hospital, Aurora, Ill.....	213
Kaylor, R. J.—Youngstown Sheet and Tube Company's Hospital.....	109
Keppel, M. D., Frederick D.—The Modern Hospital as a Health Factory	303
Knowles, E. R.—Principles of Daylight and Artificial Lighting of Hospitals	22
Lambert, M. D., Alexander—Provision for Medical Care Under Health Insurance	95
Lewinsky-Corwin, M. D., E. H.—The Hospital or Fifth Year.....	392
Mayo, M. D., Charles H.—Nature, Value, and Necessity of Team-Work in a Hospital.....	1
McCleery, Agnes P.—The Value of Employees' Medical and Social Service Department.....	208
Miller, Albert H.—Proposed Numerical System of Hospital Records	185
Moulder, M. D., J. McLean—The New Bethany Hospital, Kansas City, Kan.....	292
Nealley, M. D., W. J.—Brooklyn's Oldest Hospital Built Anew.....	361
North, M. D., Charles E.—Safeguarding the Hospital's Most Valuable Food—Milk	13
Price, M. D., George M.—Cloak, Suit, Skirt, Dress, and Waist Industries	111
Schmidt, Richard E.—Illinois Central Railroad Opens New Hospital	98
Shepardson, R. S.—The New General City Hospital, Aurora, Ill.....	213
Special Correspondent—Army and Navy General Hospital at Hot Springs, Ark.....	459
Special Correspondent—Letterman United States Army Hospital at San Francisco.....	190
Special Correspondent—United States Navy Tuberculosis Sanatorium, Fort Lyon, Colo.....	29
Street, John Phillips—Artificially Colored Foods.....	33
Street, John Phillips—Canned Vegetables—Food Value and Trade Methods	205
Street, John Phillips—Canned Fruits—Their Quality, Purity, and Price	384
Street, John Phillips—Edible Pastes—Macaroni, Spaghetti, Vermicelli, Noodles.....	463
Styles, M. D., William A. L.—Hotel Dieu de Saint Joseph, Montreal	310
Sutton, Frank—Plumbing and Hot Water Systems for Hospitals.....	196
Sutton, Frank—Should the Hospital Buy Power or Install a Plant?	31
Sutton, M. D., L. F.—Plans for a County Tuberculosis Hospital.....	466
Towns, Charles B.—Care of Alcoholics in the Modern Hospital.....	473
Turpin, M. C.—Where Welfare of Employees Is Considered of Great Importance	300
Wald, Everett D.—Metropolitan Life Insurance Company Tuberculosis Sanatorium.....	278
Walker, Anne Kendrick—Looking Beyond the Door of Welfare Service in the Department Store.....	119
Walker, Sydney F.—The Lighting of Hospitals in Great Britain	469
Walsh, William H.—Welfare and Efficiency Achieved at the Same Time	115
Waltz, Ornan H.—Private Room Building of the Robert Packer Hospital	198
Watterson, M. D., Walter H.—Plans for a County Tuberculosis Hospital	466

CURRENT HOSPITAL LITERATURE—

Adequate Institutional Care of the Tubercular.....	169
American Hospital in Munich, The.....	168
Average Cost of Hospitals and the Standards of Hospital Construction in Italy	416
Business of a Modern Hospital, The.....	169
Butter Versus Margarine.....	240
Care of Blind Soldiers in Milan.....	168
Care of the Sick at Dordrecht.....	52
Central Hebrew Hospital in Amsterdam, The.....	487
Children's Clinic of the Municipal Hospital at Amsterdam, The.....	489
Christiania Municipal Hospital for the Insane at Dikemark, Asker, The	240
Cleaning Aluminum Ware.....	52
College Nursing.....	488
Conditions of the Hospitalization of Children.....	489
Convalescence Services in Children's Hospitals in 1916.....	487
Critical Analysis of Out-Patient Work from the Point of View of Efficiency, A.....	326
Day Sanatorium "Het Weusthag" of the Anti-Tuberculosis Society at Hengelo.....	488
Dietotherapy	52

CURRENT HOSPITAL LITERATURE—Continued.

Economical Treatment of the Tubercular Patients in the Temporary Hospitals	415
Education of the Nurse, The.....	488
Emma Clinics in Utrecht, The.....	241
English Hospitals Recommend the Use of Margarine in Place of Butter	324
Experiments with Rubber Gloves.....	240
Fiftieth Anniversary of the State Hospital for the Insane at Eberswalde, The	241
Frozen and Dried Eggs.....	168
Fumigation by Cyanide Gas.....	417
Function of the Observation Ward at the City Hospital, The.....	326
Function of the Pathological Laboratory in the State Hospital Service, The	416
Garibaldi Hospital at Melito, Calabria, The.....	487
German Hospital Trains.....	52
Getting Rid of Ants.....	326
History of the Care of the Insane in Denmark.....	168
Hospital Assistance in Florence.....	325
Hospital Chemical Laboratory, The.....	240
Hospital Development in Germany from 1888 to 1913.....	167
Hospital Experience With an Open-air Hall.....	488
Hospital Hints	242
Hospital Internship	326
Hospitalization at Leysin of Indigent Citizens of Vaud Affected with Surgical Tuberculosis.....	324
Hospitalization for Tuberculous Soldiers, The.....	487
Hospitalization of Prisoners of War Needing Climatic Treatment	167
Hospital Liability	53
Hospital of the French Cities in Milan, The.....	324
Institutional Disposal of Sputum	242
Institutional Treatment of Consumption, The.....	169
Is an Aseptic Operating Room Possible?.....	489
Isolation Hospitals in the War Zone.....	488
Laboratory in Its Relation to the Purchase of Supplies, The.....	417
Location of Hospitals, The.....	169
Mobile Surgical Hospitals, The.....	415
Modern Pavilion Hospital on the Barrack Style, A.....	488
Mortality Among the Patients of the French Military Hospitals.....	52
Municipal Hospital as a Factor in Clinical Teaching, The.....	324
New Pediatric Clinic in Milan, The.....	324
Ocean Hospital at La Panne, The.....	487
Operating Room Illumination.....	168
Organization and Management of Children's Hospitals, The.....	240
Pennsylvania Workmen's Compensation Act as It Affects Hospitals, The	242
People's Sanatorium Umberto I at Pratomaso, The.....	240
Ponti Pavilion of Mechanotherapy, The F.....	416
Portuguese-Hebrew Hospital in Amsterdam, The.....	324
Preparation of the Patient for Operation, The.....	242
Problem of Tuberculosis Sanatoriums, The.....	415
Psychiatric-Neurological Clinic in Groningen, The.....	241
Raw Versus Boiled Milk.....	415
Report of Eighty-two Cultures Taken from Physicians' Clinical Thermometers	416
Resuscitation Apparatus	167
Royal Institution of the Annunziata in Naples, The.....	487
Shall the Fahrenheit Thermometer Be Abolished?.....	325
Social Service at the Massachusetts General Hospital.....	168
Solution of Antimony from Enamel Cooking Utensils, The.....	241
Standard for Determining the Suitability of Patients for Admission to a Free Dispensary.....	325
Standardization of State Requirements of Training Schools for Nurses	324
Trailer Ambulance, The.....	242
Training the Hospital Dietitian.....	325
Tuberculosis Sanatoriums in Bratsberg District.....	487
Vitamines and Bread	241
War Hospitals of Vienna, The.....	53
War's Effect on the Special Hospital, The.....	52
Washing and Cleaning.....	325
What Constitutes the Ideal Method for the Admission of Mental Patients to State Institutions?.....	169
What Is a Good Refrigerator?.....	241
What Is Meant by Hospital Efficiency?.....	53, 169
World's First Hospital Ship, The.....	415

DEPARTMENT OF DIETETICS—

Change of Work, A.....	432
Chef on Wholesome Meats, A.....	432
Chemical Composition of Commercial Glucose and Its Digestibility	506
Citrus Fruits in the Hospital.....	503
Dietitian at Work in the Modern Industrial Plant, The.....	179
Eckman's New Field, Miss.....	432
Food Selection for Rational and Economical Living.....	428, 503
Interest in Dietetics.....	253
Langworthy's Helpful Paper, Dr.....	428
Preparation and Service of Diets in the Massachusetts General Hospital, The	67
Recent Cornell Meeting, The.....	253
Some Institution Kitchen Problems.....	342
Tasty Desserts and Beverages.....	256
Westfield Standard, The	254
Wheat Flour	69, 180
Wheat Flour and Bread Costs.....	343
Wheat Flour and Other Flours.....	254
White Bread as Food.....	430

DEPARTMENT OF LIFE EXTENSION—

Life Extension, Health, and Efficiency.....	60
Medicine Habit, The.....	251

DEPARTMENT OF NURSING—

Advances in Nursing.....	244
Corrective Work and Its Relation to the Nurse.....	55
Department of Nursing and Social Service of the Washington University of St. Louis.....	57
How Shall the Superintendents of Small Hospitals Be Trained?.....	419
New Patriotism, The.....	171

DEPARTMENT OF NURSING—Continued.

Place of Tuberculosis Work in a Nurse's Training, The.....	422
Report of the Proceedings of the National Organization for Public Health Nursing at the New Orleans Convention for Some Educational Problems of Mutual Interest to the Physician and the Nurse.....	244
Teaching of Ethics in Schools of Nursing.....	492
Training School for Nurses as a Social Center, The.....	328
Value of a Course in Household Economics in the Training School.....	491
What a Nurse Should Contribute to Team-Work.....	171
Why Does the Nurse in the General Hospital Need Training for Mental Work?.....	329

DISPENSARY AND OUT-PATIENT WORK—

Dispensaries Growing in the Southern States.....	427
Dispensaries in the Southern States.....	73
Dispensary Progress in Chicago.....	498
Dispensary, The—A Paying Investment for Industry.....	175
Methods of Admitting and Registering Dispensary Patients.....	498
Progress at the Hartford Dispensary.....	73

EDITORIAL—

Aims of Industrial Welfare, The—Duncan.....	127
An Item in Education.....	36
Another Hospital in Politics.....	308
Apology, An.....	132
Autopsies in Small Hospitals.....	477
Before and After—The Hospital.....	476
Best Part of the Program, The.....	308
Comprehensive Public Health Study.....	38
Conservation of the Health of Industrial Workers, The—Goldwater.....	124
Death of Dr. John B. Murphy.....	221
Death of Dr. Paul Paquin.....	127
Enlightened Medical Leadership.....	220
Figures for Standardization.....	396
Grading of Nurses.....	310
Hotel Dieu de Saint Joseph, Montreal—Styles.....	310
Industrial Welfare—A Special Number.....	36
Industrial Welfare Number, The.....	223
Industrial Welfare Work—Boiled Down.....	129
Logical Annual Report, A.....	309
National Safety Council, The—Babcock.....	477
New Department, A—Industrial Welfare.....	128
Newer Hospital Service, The.....	479
Philadelphia Meeting, The.....	221, 394
Real Public Health Service.....	220
Small Community Hospital, The.....	479
Small Hospitals, The—At Philadelphia.....	395
Standardized First Aid in the Hospital.....	478
Team-Work.....	37
Visiting Nurse in Industry, The—Foley.....	125
Work for Child Welfare.....	396

HINTS FOR HOSPITAL SUPERINTENDENTS.....86, 184, 270, 356

HOSPITAL KITCHEN, THE—

All-White Kitchen, The.....	81
Starching Methods in Use Today.....	82

HOSPITAL, MEDICAL, AND SPECIAL MEETINGS—

<i>American Hospital Association—</i>	
Address of President Winford H. Smith, M. D.....	312
American Hospital Association Gets Ready.....	40
American Hospital Association Meeting at Philadelphia.....	224
American Hospital Association—Official Bulletin for December.....	480
Clinics for Venereal Diseases—Why We Need Them—How to Develop Them.....	495
Disinfection and Other Practicable Methods of Preventing the Spread of Infection in Hospitals.....	316
For Hospital Standardization.....	481
Grading and Classification of Nurses.....	318
Hospital Accounting and Finances.....	482
Hospital Section Had No Program.....	40
Meeting of the American Hospital Association.....	398
Open Hospital, The—A Factor in Preventive Medicine.....	411
Philadelphia Convention Surpasses All Previous Meetings.....	398
Ross' Report, Dr.—Development of the Association.....	409
<i>Catholic Hospital Association—</i>	
Address of the President of the Catholic Hospital Association.....	44
Catholic Hospital Association Meeting.....	43
Hospital's Obligation to Every Patient Who Enters the Institution, The.....	319
Medical Profession's Obligation to the Patient, The.....	9
Nature, Value, and Necessity of Team-Work in a Hospital.....	1
What the Nurse Should Contribute to the Team-Work.....	171
What the Patient Should Contribute to the Team-Work.....	48
What the Physician Should Contribute to the Team-Work.....	46
<i>Miscellaneous—</i>	
Community's Obligation for the Care of Its Indigent Sick and Injured, The.....	49
Ohio Hospital Association Meeting.....	41
West Virginia Hospitals Meet.....	414

ILLUSTRATIONS—

Adjustable Artificial Limbs.....	515
All-Metal Hot Water Bottle, An.....	183
All-White Kitchen, The.....	81
American Hospital Association Meeting at Philadelphia.....	224
American Rolling Mills Company, Middletown, Ohio.....	156
Apparatus for Handling Helpless Invalids.....	183
Armour & Co., Chicago, Ill.....	150
Army and Navy General Hospital at Hot Springs, Ark.....	459
Arntzen Auxiliary Stretcher.....	353
Bedsore in the Hospital.....	517
Brooklyn's Oldest Hospital Built New.....	361
Brown & Bigelow, St. Paul, Minn.....	158
Brown & Sharpe Manufacturing Company, Providence, R. I.....	153
Chicago Telephone Company.....	133
Cloak, Suit, Skirt, Dress, and Waist Industries.....	111
Commonwealth Steel Company, St. Louis, Mo.....	259
Composite Appeal, The.....	176

ILLUSTRATIONS—Continued.

Contagious Building, Memorial Hospital, New London, Conn., The.....	306
Convalescent Institution, The—Methods—Results.....	367
Convenient Diet Chart, A.....	341
Death of Dr. John B. Murphy.....	221
Death of Dr. Paul Paquin.....	127
Dim-a-Lite Rheostat.....	182
Donaldson Company, L. S., Minneapolis, Minn.....	261
Efficient Heating for Institutional Groups.....	217
Electric Blanket.....	267
Electric Incubators.....	352
Equitable Life Assurance Company, New York.....	162
Extension Apparatus.....	182
Facilities and Procedure for Tonsil and Adenoid Operations in New York City Hospitals and Dispensaries.....	333
First Units of the New Buffalo City Hospital.....	447
Floot of the Battle Creek Anniversary Pageant.....	522
Food Carriages at Sea View and Greenpoint Hospitals.....	181
Gordon & Ferguson, St. Paul, Minn.....	434
Hipwood Pneumatic Crutch.....	514
Hospital and Office Scales.....	353
Hospital Circulating Library, A.....	445
How We Kept the Kiddies Out of Danger.....	501
Illinois Central Railroad Opens New Hospital.....	98
Illinois Steel Company, Joliet, Ill.....	163
Improved Fowler Position Attachment for Hospital Beds.....	351
Industrial Welfare Work a Factor in Modern Management.....	104
Instantaneous Steam Sterilizing.....	436
In the Coal Mines.....	149
Kuttner-Leitz Microcolorimeter.....	438
Larkin Company, The, Buffalo, N. Y.....	159
Leterman United States Army Hospital at San Francisco.....	190
Lighting of Hospitals in Great Britain.....	469
Looking Beyond the Door of Welfare Service in the Department Store.....	119
Magnetic Wave Generator.....	436
Mandel Brothers, Chicago, Ill.....	345
Methods of Admitting and Registering Dispensary Patients.....	498
Metropolitan Life Insurance Company Tuberculosis Sanitarium.....	278
New Apparatus for the Determination of the Correct Specific Gravity of Urine.....	435
New Army Train for the Mexican Border.....	378
New Bethany Hospital, Kansas City, Kan., The.....	292
New Container for Surgical Suture Material.....	78
New General City Hospital, Aurora, Ill.....	213
New Jersey Zinc Company, Palmerton, Pa.....	161
New Obesity Apparatus.....	76
New Restraint Apparatus.....	514
New Sanitary Vacuum Cleaner.....	351
New Sink for Plaster Work.....	181
New Type of X-Ray Tube.....	435
New X-Ray Apparatus.....	78
Nylander Saline Solution Heater.....	352
Operating Knife with Detachable Blades.....	267
Opinions on Sex Education.....	249
Parke, Davis & Co., Detroit, Mich.....	152
Pierce-Arrow Motor Car Company, Buffalo, N. Y.....	144
Plans for a County Tuberculosis Hospital.....	466
Preparation and Service of Diets in the Massachusetts General Hospital, The.....	67
Prepared Vaginal Tampon.....	351
Present Scope of Welfare Work in the Iron and Steel Industry.....	91
Price & Co., Ed. V., Chicago, Ill.....	208
Private Room Building of the Robert Parker Hospital.....	198
Proctoclysis Apparatus.....	267
Prudential Insurance Company, Newark, N. J.....	139
Queensborough Hospital Planned Large, Built Small.....	382
Real Community Hospital Service.....	432
Remington Arms and Ammunition Company, Bridgeport, Conn.....	348
Revolving Operating Room.....	264
Rieber Roentgen Converter.....	516
Robinson Memorial of the Massachusetts Homeopathic Hospital.....	4
Safeguarding the Hospital's Most Valuable Food—Milk.....	13
Sanitary Waste Receptacle.....	514
Sexual Armor for Prevention of Self-Abuse by Insane Patients.....	437
Shadow Box for Use in Stereopticon Demonstrations in Amphitheaters and Rooms Which Cannot Be Darkened.....	266
Shredded Wheat Company, Niagara Falls, N. Y.....	164
Simplified Apparatus for Blood Transfusion.....	76
Simplified Tonometer.....	182
Small Community Hospital, The—The Interior Arrangement.....	388
Systematic Health Service for Employees.....	87
Training School for Nurses as a Social Center, The.....	328
Uniform for the Wet Nurse.....	265
United States Navy Tuberculosis Sanatorium, Fort Lyon, Colo.....	29
Utility Chassis.....	515
Value of Employees' Medical and Social Service Department, The.....	208
Value, Scope, and Expense of Routine Dental Treatment in Hospitals, The.....	442
Welfare and Efficiency Achieved at the Same Time.....	115
Welfare Work in a Bookbinding Establishment.....	122
Wheatena Company, Rahway, N. J.....	262
Where Welfare of Employees Is Considered of Great Importance.....	300
Youngstown Sheet and Tube Company's Hospital.....	109

INDEX OF HOSPITAL AND SANATORIUM LITERATURE—

54, 170, 243, 327, 418, 490

INDUSTRIAL WELFARE—

Altman & Co., B., New York City.....	119
American Association for Labor Legislation.....	346
American Blower Company, Detroit, Mich.....	166
American Bridge Company.....	93
American Rolling Mills Company, Middletown, Ohio.....	156
Armour & Co., Chicago, Ill.....	150
Black & Co., H., Cleveland, Ohio.....	346
Brown & Bigelow, St. Paul, Minn.....	158
Brown & Sharpe Manufacturing Company, Providence, R. I.....	153
Bush Terminal Company, New York City.....	349
Chicago Telephone Company.....	133
Cincinnati Milling Company, Cincinnati, Ohio.....	166
Cloak, Suit, Skirt, Dress, and Waist Industries—Price.....	111
Colorado Fuel and Iron Company.....	261
Commonwealth Steel Company, St. Louis, Mo.....	259

INDUSTRIAL WELFARE—Continued.

Donaldson Company, L. S., Minneapolis, Minn.	261
Eastman Kodak Company, Rochester, N. Y.	349
Employees' Service Department.	267
Equitable Life Assurance Company, New York.	162
Firestone Tire and Rubber Company, Akron, Ohio.	350
Frick Coke Company, H. C.	93
Gordon & Ferguson, St. Paul, Minn.	434
Illinois Steel Company, Joliet, Ill.	163
Illinois Steel Company, South Chicago, Ill.	91
Industrial Welfare Work a Factor in Modern Management— Eaton	104
Interborough Rapid Transit Company, New York.	136
International Harvester Company, Chicago, Ill.	147
In the Coal Mines.	149
Industrial Welfare Number, The.	223
James Store Company, Kansas City, Mo.	155
Joint Board of Sanitary Control, New York City.	111
Kingston Coal Company, Kingston, Pa.	149
Larkin Company, The, Buffalo, N. Y.	159
Looking Beyond the Door of Welfare Service in the Depart- ment Store—Walker	119
Lowe Brothers Company, Dayton, Ohio.	165
Ludlow Manufacturing Company, Boston, Mass.	166
Macy's, New York City.	267
Mandel Brothers, Chicago, Ill.	345
Marshall Field & Co., Chicago, Ill.	160
Merck & Co., New York City.	434
Metropolitan Life Insurance Company, New York City.	87
Michigan Stove Company, Detroit, Mich.	166
Mineral Railroad and Mining Company, Shamokin, Pa.	150
National Lamp Works, Cleveland, Ohio.	165
New Jersey Zinc Company, Palmerton, Pa.	161
Occupational Hazard in the Chemical Industry—The Need for Prophylaxis	507
Parke, Davis & Co., Detroit, Mich.	152
Penn-Mary Coal Company, Heilwood, Pa.	92
Pierce-Arrow Motor Car Company, Buffalo, N. Y.	144
Present Scope of Welfare Work in the Iron and Steel Industry— Darlington	91
Price & Co., Ed. V., Chicago, Ill.	209
Prudential Insurance Company, Newark, N. J.	139
Remington Arms and Ammunition Company, Bridgeport, Conn.	348
Santa Fe Railway System, The.	161
Saxon Mills, Spartanburg, S. C.	433
Shredded Wheat Company, Niagara Falls, N. Y.	164
Simmons Hardware Company, St. Louis, Mo.	433
Standard Sanitary Manufacturing Company, Louisville, Ky.	350
Systematic Health Service for Employees—Frankel	87
Tapley Company, J. F., New York City.	122
Tennessee Coal, Iron, and Railroad Company.	92
Union Malleable Iron Company, East Moline, Ill.	511
United Shoe Machinery Company, Beverly, Mass.	115
United States Playing Card Company, Cincinnati, Ohio.	166
Wanamaker Store, John, Philadelphia, Pa.	347
Welfare and Efficiency Achieved at the Same Time—Walsh.	115
Welfare Work in a Bookbinding Establishment.	122
Western Electric Company, Chicago, Ill.	157
West Frankfort, Ill., Welfare Work.	345
Westinghouse Electric and Manufacturing Company, East Pitts- burg, Pa.	262
Wheatena Company, Rahway, N. J.	262
Where Welfare of Employees Is Considered of Great Import- tance—Turpin	300

INSTITUTION LIBRARIES—

Condensed Report of the Meeting of the National Conference of Charities and Corrections	71
--	----

LETTERS TO THE EDITOR—

Autopsies in Hospitals for the Insane.	80
--	----

MISCELLANEOUS—

Accidents and Immigrant Workmen.	67
American Association for Study and Prevention of Infant Mor- tality	277
American Association of Industrial Physicians and Surgeons.	123
Another Hospital Affected by Politics.	287
At the Examination.	269
Battle Creek Has Semi-Centennial.	271
Bedsore in the Hospital.	517
"Big Brother" Movement, The.	518
California Raises the Standard.	495
Cleaning Silver by Contact with Aluminum in Alkaline Solution.	294
Cleanliness in the Hospital.	85
Convenient Diet Chart.	341
Crime Cured by Surgery.	414
Decision in Regard to Corn Syrup, The.	291
Dispensary Rounders—Real and Imaginary.	359
Dumbwaiters and Elevators for Hospitals.	271
Dynamic Effect of Food.	35
Efficient Organized Charity.	84
Examine Peddlers for Disease.	118
Fakers in Tuberculosis Hospital.	28
Financing of Hospitals, The.	197
Float of the Battle Creek Anniversary Pageant.	522
Following Up Infantile Paralysis.	358
Great Fund to Pennsylvania Hospital.	393
Great Medical Center for Chicago.	475
Hay Fever Treated by Ordinance.	35
Hints About Buying Motor Ambulances.	397
Hospital Circulating Library, A.	445
Hospitals and the Control of Cancer.	520
Hospital's Liability for a Patient's Child, The.	414
How to Calculate Syrup Density.	323
Ice Cream Making Regulated.	212
In a French War Hospital.	207
In the Hospital.	360
Indian "Caste" in British Hospitals.	132
Insane Aliens Let Loose.	83
Insane Have Unique Periodical.	272
Interior Decorations in Hospitals.	337
Iowa's County Hospitals.	201
Is the Coroner's Office Obsolete?	60
Lessons in the Hospital.	17

MISCELLANEOUS—Continued.

Leveling Process in the Hospital, The.	83
Liability for Injury to a Patient.	291
Louis R. Curtis Makes a Change.	522
Margaret Teresa O'Donovan, Nurse.	479
Massachusetts Tuberculosis Dispensaries and Their Relation to the Practicing Physicians, The.	Oct. adv. 46
Minimum Laboratory Equipment.	517
Misbranding of Diabetic Foods.	201
Much Superintended Hospital, A.	418
New Visiting Nurse Plan.	495
New York Launches New Floating Hospital.	51
New York Seeks Clinic Doctors.	472
Notable and Unique Charity, A.	74
Pasteurized Milk Causes Scurvy.	3
Porter's Beer Is Gone, The.	252
Physicians and Nurses as Missionaries.	426
Plan Work for Child Welfare.	442
Purchasing Textiles for Hospitals.	465
Real Community Hospital Service.	432
Red Cross Equips Two Base Hospitals.	269
Red Cross Organizes Base Hospitals.	90
Safety Council Has a Banner Meeting.	424
Salvarsan Comes from Germany.	97
Sane Persons in Insane Hospitals.	51
Sea Mussels as a Food in Hospitals.	323
Silence Zones for Boston Hospitals.	12
Study of Cancer Taking Form.	387
Study Health Insurance, To.	54
Surgeon's Responsibility, The.	12
Telegraphic Signal System, A.	239
To Discuss Social Hygiene.	414
To Prevent and Cure Heart Disease.	357
United States Army Wants More Nurses.	97
Value, Scope, and Expense of Routine Dental Treatment in Hospitals, The	442
Would Standardize Hospitals.	472

MODERN SANATORIUM, THE—

Aftermath of the Ohio Convention.	178
Physical Examination, The.	74
Sanatorium a Tutor in the Art of Living for All Workers.	178
Value of Exercise, The.	340

NEW INSTRUMENTS AND EQUIPMENT—

Adjustable Artificial Limbs.	515
All-Metal Hot Water Bottle.	183
Apparatus for Handling Helpless Invalids.	183
Arntzen Auxiliary Stretcher.	353
Dim-a-Lite Rheostat.	182
Electric Blanket.	267
Electric Incubators.	352
Extension Apparatus.	182
Food Carriages at Sea View and Greenpoint Hospitals.	181
Fry Laboratory Glassware.	266
Hipwood Pneumatic Crutch.	514
Hospital and Office Scales.	353
Improved Fowler Position Attachment for Hospital Beds.	351
Instantaneous Electric Steam Sterilizing.	436
Kuttner-Leitz Microcolorimeter.	437
Magnetic Wave Generator.	436
New Apparatus for the Determination of the Correct Specific Gravity of Urine.	435
New Container for Surgical Suture Material.	78
New Obesity Apparatus.	76
New Restraint Apparatus.	514
New Sanitary Vacuum Cleaner.	351
New Sink for Plaster Work.	181
New Type of X-Ray Tube.	435
New X-Ray Apparatus.	78
Norwich Absorbo-Sheet.	435
Nylander Saline Solution Heater.	352
Operating Knife with Detachable Blades.	267
Prepared Vaginal Tampon.	351
Proctoclysis Apparatus.	267
Revolving Operating Room.	264
Rieber Roentgen Converter.	516
Sanitary Waste Receptacle.	514
Sexual Armor for Prevention of Self-Abuse by Insane Patients.	437
Shadow Box for Use in Stereopticon Demonstrations in Amphi- theaters and Rooms which Cannot Be Darkened.	266
Simplified Apparatus for Blood Transfusion.	76
Simplified Tonometer.	182
Uniform for the Wet Nurse.	265
Utility Chassis.	515

NEWS OF THE HOSPITAL FIELD.....adv. 34, 34, 34, 34, 34, 34

ORIGINAL ARTICLES—

Army and Navy General Hospital at Hot Springs, Ark.—Spe- cial Correspondent.	459
Artificially Colored Foods—Street.	33
Brooklyn's Oldest Hospital Built Anew—Nealley, Hewlett.	361
Canned Fruits—Their Quality, Purity, and Price—Street.	384
Canned Vegetables—Food Value and Trade Methods—Street.	205
Care of Alcoholics in the Modern Hospital—Towns.	473
Cloak, Suit, Skirt, Dress, and Waist Industries—Price.	111
Contagious Building, Memorial Hospital, New London, Conn., The—Burby	306
Convalescent Institution, The—Methods—Results—Brush.	367
Edible Pastes—Macaroni, Spaghetti, Vermicelli, Noodles—Street.	463
Efficient Heating for Institutional Groups—Baum.	217
First Units of the New Buffalo City Hospital—Green & Wicks.	447
Four Years of the Washington County (Iowa) Hospital—Boice.	456
Hospital and the Surgeon, The—Goldwater.	273, 371
Hospital or Fifth Year, The—Lewinsky-Corwin.	392
Illinois Central Railroad Opens New Hospital—Schmidt.	98
Industrial Welfare Work a Factor in Modern Management— Eaton	104
Letterman United States Army Hospital at San Francisco, The— Special Correspondent	190
Lighting of Hospitals in Great Britain, The—Walker.	469

ORIGINAL ARTICLES—Continued.

Looking Beyond the Door of Welfare Service in the Department Store—Walker	119
Medical Profession's Obligation to the Patient, The—Christian..	9
Metropolitan Life Insurance Company Tuberculosis Sanatorium—Howk, Waid	278
Modern Hospital as a Health Factory, The—Keppel.....	303
Nature, Value, and Necessity of Team-Work in a Hospital—Mayo	1
New Army Train for the Mexican Border—Grinnell.....	378
New Bethany Hospital, Kansas City, Kan., The—Moulder.....	292
New General City Hospital, Aurora, Ill., The—Jordan, Shepard- 50.1	213
Owner, the Architect, and the Engineer, The—Goldschmidt.....	288
Plans for a County Tuberculosis Hospital—Watterson, Sutton.....	466
Plumbing and Hot Water Systems for Hospitals—Sutton.....	196
Present Scope of Welfare Work in the Iron and Steel Indus- try—Darlington	91
Principles of Daylight and Artificial Lighting of Hospitals— Knowles	22
Private Room Building of the Robert Packer Hospital—Waltz, Guthrie	198
Proposed Numerical System of Hospital Records—Miller.....	185
Provision for Medical Care Under Health Insurance—Lambert... 95	
Queensborough Hospital Planned Large, Built Small.....	382
Robinson Memorial of the Massachusetts Homeopathic Hospital— Hill	4
Safeguarding the Hospital's Most Valuable Food—Milk—North... 13	
Should the Hospital Buy Power or Install a Plant?—Sutton.... 31	
Small Community Hospital, II, The—Its Finances—Hornsby..... 18	
Small Community Hospital, III, The—The Planning—Hornsby... 202	
Small Community Hospital, IV, The—Constructing the Building— Hornsby	295
Small Community Hospital, V, The—The Interior Arrangement —Hornsby	388
Systematic Health Service for Employees—Frankel.....	87
United States Navy Tuberculosis Sanatorium, Fort Lyon, Colo.— Special Correspondent	29
Value of Employees' Medical and Social Service Department, The—McCleery	208
Ward Patient at Sloane Hospital for Women, New York City, The—Hutchison	210
Welfare and Efficiency Achieved at the Same Time—Walsh.....	115
Welfare Work in a Bookbinding Establishment.....	122
What Dispensary Work Should Stand For—Cabot.....	467
Where Welfare of Employees Is Considered of Great Importance —Turpin	300
Youngstown Sheet and Tube Company's Hospital—Kaylor.....	109

PHILANTHROPY AND THE PUBLIC HEALTH—

Facilities and Procedure for Tonsil and Adenoid Operations in New York City Hospitals and Dispensaries.....	333
How We Kept the Kiddies Out of Danger.....	501
Indexes of Nutrition and Growth.....	425
Mental Clinics and Their Definite Purpose.....	63
Nutritional Guidance	63
Welfare Work—The Working Out of a New Idea in Industry... 174	

PREVENTION OF BLINDNESS—MATERNITY—

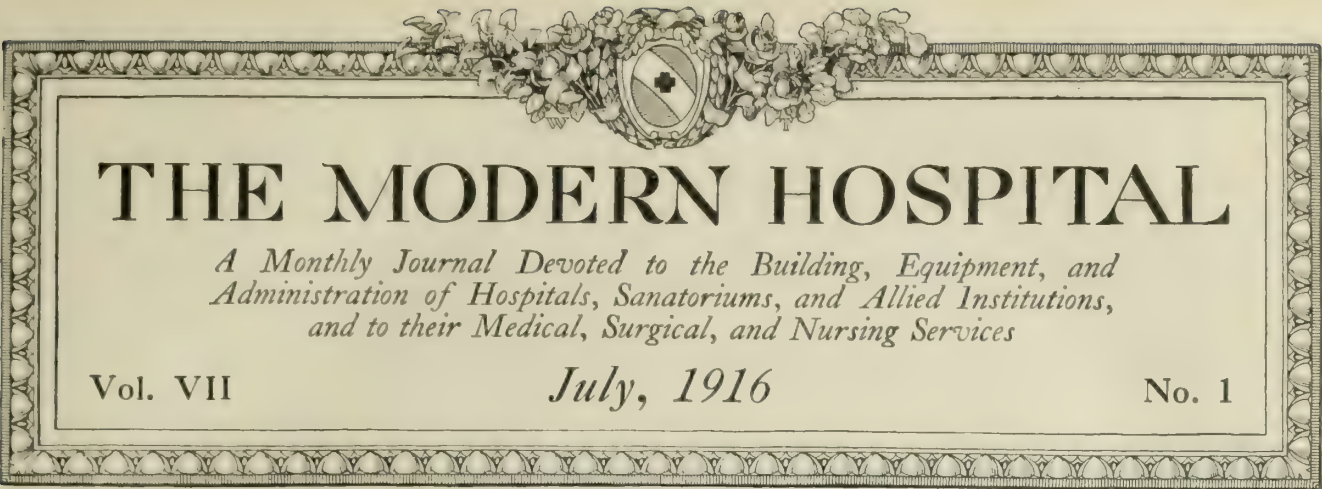
Motion Pictures and Eyestrain.....	338
------------------------------------	-----

QUERIES AND ANSWERS—

Administrative Medical Staff Problems.....	79
Another Doctor's Patient.....	513
Contagious Diseases in General Hospitals.....	268
Cost and Limits of Welfare Work.....	441
Cost of a New Hospital.....	354
Cost of Building and Maintenance.....	511
Entertainment for Workers.....	350
Hospital Admission of Charity Cases.....	268
Hospital Organization, The.....	439
How to Treat Bed Sores.....	440
Industrial Welfare Problems.....	263
Laundry Chutes	268
Nurses and Rubber Runners.....	354
Partnership X-Ray Department.....	512
Per Capita Cost, The.....	355
Plans for a Small Hospital.....	80
Private Convalescent Homes.....	269
Responsibility for the Scientific Work.....	512
Segregation for the Infectious Diseases.....	80
Selection of Training School Pupils.....	440
Size of the Administrative Staff.....	438
Sterilization of Rubber Gloves.....	268
Wants Isolation in Small Hospital.....	440
Welfare Work and Strikes.....	263
What an Annual Report Should Be.....	511
Who Furnishes the Gloves?.....	79

SOCIAL HYGIENE—VENEREAL DISEASES—

Clinics for Venereal Diseases—Why We Need Them—How to Develop Them.....	495
Composite Appeal, The.....	176
Industrial Welfare Work and Social Hygiene.....	176
Opinions on Sex Education.....	249
Problem of Venereal Diseases in Public Health Nursing, The... 65	



THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. VII

July, 1916

No. 1

NATURE, VALUE, AND NECESSITY OF TEAM-WORK IN A HOSPITAL¹

Present Great Need Is For Organization—Hospitals Moving to the Country—The Question of Interns—Reports and Records—Pay Clinics in Step With Modern Ideals

By CHARLES H. MAYO, M. D., ROCHESTER, MINN.

THE present program has exemplified the thought that the spirit of the age is best expressed in organization, and indicates the gradual approach to a rational socialism.

The history of hospital development takes the student back to centuries before the Christian era. After this period the idea became greatly broadened, although it was not until about 1500 A. D. that the true usefulness of hospitals was recognized.

HOSPITAL STANDARDIZATION.—The necessity for hospital standardization has been discussed in various medical meetings for several years, with the annual appointment of committees for reports, and much good has been accomplished from the publicity. The American College of Surgeons has, of necessity, taken up the work of standardizing hospitals, and all institutions which desire to be recognized must come within state requirements. Such investigation and classification of hospitals will require several years. The greatest help is expected from this association of Catholic hospitals now holding its second annual meeting.

HOSPITAL LOCATION.—Hospitals in Europe have been more wisely located than in America, having a setting in spacious grounds, where they secure the full benefit of air, quiet, and sunlight. In this country we have built in the most congested areas, lacking every hospital need except plenty of the poor. In such localities there should be only emergency institutions or automobile ambulance stations. Hospitals situated in cities should have at least a country convalescent home, where ambulatory patients may recover. Automobile transportation of the sick is

now so comfortable and rapid that distance is no longer a factor to be considered in the location of hospitals.

In modern times hospitals are quite dependent on their corps of nurses, whose ability, training, and attitude toward the work is essential for efficiency. In Europe the social standard of nurses was for a long time very low. They were recruited from the lower classes, even from prisons. Fortunately, in America the profession of nursing was started on a higher plane, and our nurses excel those of the world in intelligence, education, and culture. In Europe the nursing profession was modernized and reorganized in the middle of the last century through the necessities of war, and the present war is rapidly improving the standard of hospital attendants in the countries involved.

A nurse's training is a liberal education in itself. The instruction in cleanliness, the knowledge and treatment of disease, and especially the instruction in preventive medicine and domestic science, are valuable not only to the family, but also to the community. Thus it is that the ranks of nurses are largely depleted by matrimony. A training school for nurses is essential at least for all large hospitals.

Efficient trained sister nurses are of great value in general nursing. They are permanent general supervisors over the nurses in the training school, and have a personal interest in maintaining the hospital standard.

The interns are a recognized factor in hospital organization. They are the physicians and surgeons in charge, representing their chiefs of staff. The intern is guided in the care of the patient,

¹Read at the meeting of the Catholic Hospital Association, Milwaukee, June 7-9, 1916.

and the theory of his training becomes transformed into actual practice. Minnesota does not grant a diploma to a graduate in medicine until he has had one year of service in a hospital as intern following a four years' medical course. Further, the medical department of the University of Minnesota will not accept a student who does not hold an academic degree. When we have added to this a four-year medical course and three additional years of graduate work for a master's degree, the training of such an American physician is equal to, or better than, the requirements of any of the countries of Europe.

An efficient, harmonious working corps of physicians is very necessary in the organization of a hospital. It is not for us to discuss the method by which the staff of medical attendants should be chosen. They should certainly be considered for their fitness, and should hold their place on civil service if their efficiency is maintained. It should not be necessary for the hospital to furnish reputation for attendants who are below par and who have secured appointment by political or church pull, or the fact that they were family physicians of some of the directors. There are certain positions in a hospital which, to secure the highest efficiency, should be maintained by fixed salaries—those of the pathologist, bacteriologist, chief anesthetist, and the surgical registrar. With the recognition of the fact that many of the acute and chronic diseases, local and general, arise from a local focus—the most common source being the mouth—the true importance of dentistry is now recognized, and a dentist should be associated with every clinic and hospital, or subject to consultation call.

HOSPITAL REPORTS AND RECORDS.—In the standardization of hospitals, efficient methods of making and keeping records of all sorts will be necessary, especially the records concerning patients, their care, and the results of operation or treatment. Valuable suggestions made by Dr. Emory Codman a few years ago with regard to the form of hospital reports are now bearing fruit after being installed in many of the eastern hospitals. Dr. Codman propounded a series of questions to be asked in the individual case as follows: "What was the matter? Did they find it out beforehand? Did the patient get entirely well? If not, why not? Was it the fault of the surgeon, the disease, or the patient? What can we do to prevent similar failures in the future?" All results of surgical treatment which lacked perfection he believed could be explained by one or more of the following causes: "Errors due to lack of technical knowledge or skill; errors due to lack of surgical judgment; errors due to lack

of care or equipment; and errors due to lack of diagnostic skill." The hospital authorities should keep a duplicate record of the character of operations and their results as well as the results of other treatment. This would make it possible on their own accord to eliminate from the staff men who perform operations of questionable character. Necropsy records are most necessary, but, while they may be secured in a high percentage of cases if desired, too often they are not wanted. Such records would standardize physicians.

With all of the various hospitals, general and special, there is still need for one more—a hospital for diagnosis. In the rapid advance of medicine during the last fifty years we have seen the disappearance of that former friend and counselor, the family physician. Medicine has become so vast, so monumental, that it is no longer possible for one man to encompass it, at least in practice, although he may have very wide knowledge of the principles and theories. Team-work as exemplified in large clinics and in hospitals has become necessary in the care of the rare and complicated cases representing 10 percent of the total, while even special examinations for the well-known diseases require experts in various lines in order that the diagnosis may be proved and complications not overlooked. In the past such examinations could be secured by the wealthy, who could pay for them, and by the poor, to whom they were free. It is the middle class, the larger number, who are most dependent on the ability of one man or his assistant. The middle class in cities are frequently seen at free dispensaries because of the presence of specialists and more complete equipment. Mt. Sinai Hospital has started a pay clinic, and Dr. Goldwater, its superintendent, has stated in defense of the plan: "Experience has shown that persons of moderate means who are in need of the services of high-grade specialists have the greatest difficulty in obtaining them, for such physicians, either in their private offices or in the field, do not give their services for nominal fees. This problem, it is universally conceded, must be solved, and a great many patients are forced to solve that problem in their own way by going to free dispensaries; in fact, many such patients are referred to the dispensaries by general practitioners, who send cases to the dispensaries for diagnosis. This is especially the case when the making of diagnoses requires the use of special apparatus and equipment and the cooperation of a number of physicians. There is a large number of patients who certainly could not be put in the pauper class who cannot afford to go to the specialists. The question before us is how to solve the problem, and

to this the trustees have been devoting much attention." The situation must be recognized and dealt with. To maintain a high standard and keep the profession filled with educated and cultured men who are equipped with modern apparatus, it must be made better. In order to do this, it is necessary that physicians obtain more than the present average compensation. There are now less than half as many students of medicine as there were five years ago.

In large cities and in the medical departments of universities diagnosis hospitals should be founded solely for the purpose of observing patients, the making of all kinds of special examinations, including laboratory tests, special vaccines, and x-ray examinations. To be highly efficient, it should have also an experimental department. When the diagnosis has been completed, patients could be referred to their home physician with the diagnosis and the plan of treatment. From the librarian of the clinic could be sent references to recent literature on the subject. Some cases could be referred to special hospitals and sanatoriums, and others to surgical institutions. Such a diagnosis hospital would have the greatest educational value, and its main supporters would be the general practitioners, especially those located in smaller communities. Undoubtedly it would do much toward the elimination of that nefarious practice—the division of fees and the barter and sale of sick human beings.

We come now to the board of directors, a body rarely required in Catholic institutions, as in them the management is directed by the sisters. The interest of this board never flags, and the most arduous work becomes a pleasure, even though it be a duty. Most hospitals, of necessity, usually represent the extreme in economic management. There is, however, still much room for improvement in the appointment of efficient hospital directors. The directing fails generally through lack of organization and division of labor. A Taylor system of management would accomplish much without lessening the efficiency. There is certainly great waste in many institutions, and this system would be more commonly forced on hospitals were it not for the well-organized practice of begging. The rich usually give freely, probably with a feeling that the proverbial opening in the needle's eye may become enlarged for their passage.

Last, but by no means least, comes the chaplain. From their nature, hospitals are filled with trouble, but to the great majority of patients comes the blessing of relief and restoration of health. For some there is sorrow, however, and the incurables, the dying, and their relatives and

friends, turn for solace to the church. Thus, the valuable services of the chaplain are greatly appreciated by the medical attendants.

PASTEURIZED MILK CAUSES SCURVY

New York Physicians Sound Warning Against Continued Use of Pasteurized Milk Unless Accompanied by Fruit Juices

A good many of us have known for a long time that the pasteurization of milk was not a cure-all, either in the purification of the milk itself or for the protection of infants and the sick, but it has remained for a group of New York men to develop the fact that pasteurized milk causes scurvy in infants. The bulletin of the New York Health Department of April 29 comments on the matter as follows:

INFANTILE SCURVY AND PASTEURIZED MILK

In the discussion of Doctor Funk's interesting paper on "Vitamines, a New Factor in Nutrition," read before the Academy of Medicine last week, Dr. L. Emmett Holt expressed the opinion that infantile scurvy was undoubtedly on the increase in this city, and that the increase was due to the exclusive use of pasteurized milk in the artificial feeding of infants. That this conclusion is probably correct is indicated by the interesting clinical observation reported by Dr. Alfred Hess at the same meeting. Hess found that a mild grade of scurvy developed in a group of infants artificially fed on pasteurized milk and barley water, while a control group to whose diet orange juice was added, but who otherwise received the same milk modifications as the first group, remained entirely free from scurvy. In the first group the scorbutic symptoms promptly disappeared on the administration of orange juice.

The Department of Health is deeply interested in these papers and in the discussion they have provoked. It does not understand them to constitute a disapproval of pasteurization of milk in New York city, but rather to be a warning concerning the temporary disabilities which are produced by the exclusive use of pasteurized milk in infants. To conclude that the enactment of the pasteurization ordinance was ill-advised would indeed be unwarranted. In this connection it must be remembered that most of the cases of infantile scurvy now being encountered are of a mild type; so mild, in fact, that many of them escape recognition even at the hands of experienced physicians. Moreover, the dangers of milk-borne disease are real, and constantly carry with them a grave menace to life through tuberculosis, typhoid fever, septic sore throat, diphtheria, and other infectious diseases.

In contrast to this we have a mild grade of scurvy which can readily be prevented or cured by the addition of a little orange juice to the diet. Furthermore, a safe raw milk (guaranteed or certified) is available for those cases in which pasteurized milk, even with the addition of simple antiscorbutics, does not meet the requirements. Such cases must be extremely rare.

Instructions have been given by the Department of Health to the physicians and nurses in charge of its milk stations and of the baby welfare work in the homes to be on the alert for any of the early signs of scurvy, and to insist on the use of orange juice or other suitable antiscorbutics when babies are exclusively bottle-fed on pasteurized milk.

While the Department of Health has no intention, therefore, of altering its policy with regard to pasteurization, physicians may rest assured that it likewise does not contemplate or look with favor on any administration of milk control in any community which eliminates the privilege of securing a safe high-grade raw milk for those whose lives may depend on its use.

Dr. John C. Knauer, a member of the surgical staff of the Homeopathic Hospital, Reading, Pa., and one of its founders, died in the hospital June 3 as the result of an infection contracted when operating on one of his patients.

ROBINSON MEMORIAL OF THE MASSACHUSETTS HOMEOPATHIC HOSPITAL

Building Designed in Collaboration With the Late Dr. Mann Notable Structure Embodying the Best Thought of Modern Administrators and Designers—Some of the Details of the Maternity Unit

BY WARREN C. HILL, OF KENDALL, TAYLOR & CO., ARCHITECTS, BOSTON

THE dedication of the Jennie B. Robinson Memorial building of the Massachusetts Homeopathic Hospital in Boston on January 1, 1916, is of particular interest not only to that community, but to hospital people throughout the country as well.

The development of the maternity unit in the general hospital is receiving at the hands of hospital boards, their administration, and the public generally far more consideration than was thought necessary ten years ago. There have been and are several worthy maternity hospitals, but, as a unit of the general hospital, it is only within a few years that they have been considered in the light which they are today. The reasons for this are obvious, and they have been dwelt on in these columns so often that repetition of them is unnecessary.

The Massachusetts Homeopathic Hospital, now considered as the second largest in Massachusetts, was established by an act of the Senate and House of Representatives in General Court May 19, 1855. The hospital was first opened in January, 1871, in a building at 14 Burroughs Place, Boston, with a capacity of 16 beds. In 1874 one building was completed at the present site on East Concord street, and the hospital was moved there, increasing the number of beds to 40.

The surgical wing was opened in 1884, and in the following year the training school for nurses was established. Additions were made to the surgical and medical wings in 1891, greatly increasing the capacity of the rapidly growing institution.

In 1897 a maternity department was opened on West Newton street, in the near vicinity of the main hospital, and in the same year the Vose Hall for nurses was erected and occupied, with a capacity for 150 nurses.

In 1906 the hospital took over the Homeopathic Medical Dispensary, which had been in existence for sixty years, and this became the out-patient department, which was maintained in the one-story building, now the site of the new maternity building.

The John C. Haynes building for contagious diseases, in Brighton, was erected in 1908, a group of seven modern fireproof buildings, which also includes the residences of the superintendent and his first assistant.

The Evans Memorial for clinical research and preventive medicine was built in 1910.

During the past year the trustees have acquired the building known as Newton Hall, at present used in part for nurses of the maternity department. They purchased also land upon which it is proposed to erect in a short time the service building, containing the power plant, laundry, kitchen, bakery, dining rooms, main diet kitchen, storage room, etc., and a building for additional accommodation for nurses. This building will be connected to others of the group by means of underground tunnels or subways. They have also taken title to property on Albany street, which is now in process of alteration and which is to be occupied by employees, and the erection of a new ambulance station at the rear of some of these buildings is contemplated.

These improvements, when completed, will permit of alterations and additions to the main hospital by the erection of a new operating building on the site of the present boiler house and laundry. When this is done, the space now used for operating department in the surgical pavilion will be utilized for 40 additional beds. Extensions of the medical wing, when made, will add 40 more beds.

The late Wm. O. Mann, M. D., superintendent of the hospital for many years, although associated with many others, took the greatest interest in the maternity department, and it grew so rapidly that some years ago the department was moved from the building in which it was first established to the medical wing of the main hospital, where it remained until the opening of the new building. The normal capacity up to that time was about 40 beds. The floor formerly used for maternity has, since the opening of the Robinson building, been remodeled and converted into a modern children's department, with three wards and large play room, with beds for 50 children and infants.

The present capacity of the main hospital, including 80 beds at the maternity building and the new children's department, is 350. The contemplated additions to the surgical and medical wings, when completed, will add 100 beds, and at the contagious department, Brighton, there is a capacity of 175, making a total of 625 beds. Nash House, the convalescent home for men in Dorchester, and "Sunny Bank," the convalescent home for women



Fig. 1.

in Watertown, have a capacity of 20 each. The hospital is very popular, and usually has few spare beds. The maternity building has operated at capacity since its opening.

For many years Dr. Mann dreamed of a maternity department adequate for the purpose, and he and the architects spent much time in studying the problem, which, because of

the location and other conditions, was a peculiarly difficult one. He lived long enough to see his hope started; that he did not live to see its completion is most deeply regretted. The building was started in the latter part



Fig. 2.

of 1914 through the munificence of Wallace F. Robinson, of Boston, who provided funds for the purpose, with the stipulation that the building be named in memory of his wife, Jennie M. Robinson.

The site of the building at the



Fig. 3.



Fig. 5.



Fig. 4.

corner of Stoughton street and Harrison avenue was that of the out-patient department of the hospital, a one-story building, with basement and foundations suitable for a five-

story building. It was deemed wisest to build on these old walls rather than to disregard them entirely, and the out-patient department was temporarily housed in a nearby building. The old floors and roof were removed for the erection of the new building. In rebuilding, the ground and first and second floors follow, in a measure, the lines of the old building, and these floors are used for the out-patient depart-

medical clinics. The lecture room is used for clinical lectures, etc.

On the second floor is the orthopedic department, with ear, nose and throat, and social service rooms, and two double rooms for externs, each with private bath. Out-patients from these two floors descend to the ground floor, on which are located toilets for men and women and the pharmacy, thence out to Stoughton street by an exit used for no other purpose, avoiding confusion in traffic during the busy hours of the clinics. Rooms for male employees of this building are provided on this floor, and also work shops, storage, etc. The balance is used in connection with the maternity department for locker rooms for ward patients, laboratory, toilets for visitors, sterilizer, etc.

The entrance to the maternity department is on the Stoughton street side through a lobby (in which there is a memorial tablet erected by the trustees in token of their appreciation of the generosity of the donor) and a memorial waiting room. Access to the prenatal clinic on the second floor and to the floors above is by means of an elevator or by a staircase. There is no direct communication on the first floor between the two services, and on the second floor only as a matter of convenience for employees. The prenatal clinic is on the second floor, with dressing rooms adjoining. Two rooms for interns are also provided on this floor.

The third floor is known as the public ward floor, and has two 10-bed and two 8-bed wards and two isolating rooms for twilight, aseptic, or other cases. Delivery and labor rooms are as far removed from the wards as possible and shut off with double doors. The labor room is equipped like the delivery room in every way, giving ample capacity in an emergency. There are two toilet rooms for patients, in one of which is a special cubicle for exclusive use of nurses. There are two nurseries, with room for bathing, in the south corner, with balcony for airing. The nurse's station controls the entire floor, and is easily accessible to diet kitchen, utility, or linen room.

The fourth floor is known as the semi-private floor, and has four 2-bed and three 8-bed wards, and is identical with the floor below in all other respects. There is an incubator located in the corner nursery on this floor.

The fifth floor, which is the private patient floor, has twelve rooms, eight arranged en suite, with baths, permitting a flexible arrangement for renting with or without bath rooms. The nursery and bathing room are smaller on this floor, and adjoining the diet kitchen is a special kitchen or laboratory for preparation of milk for the entire

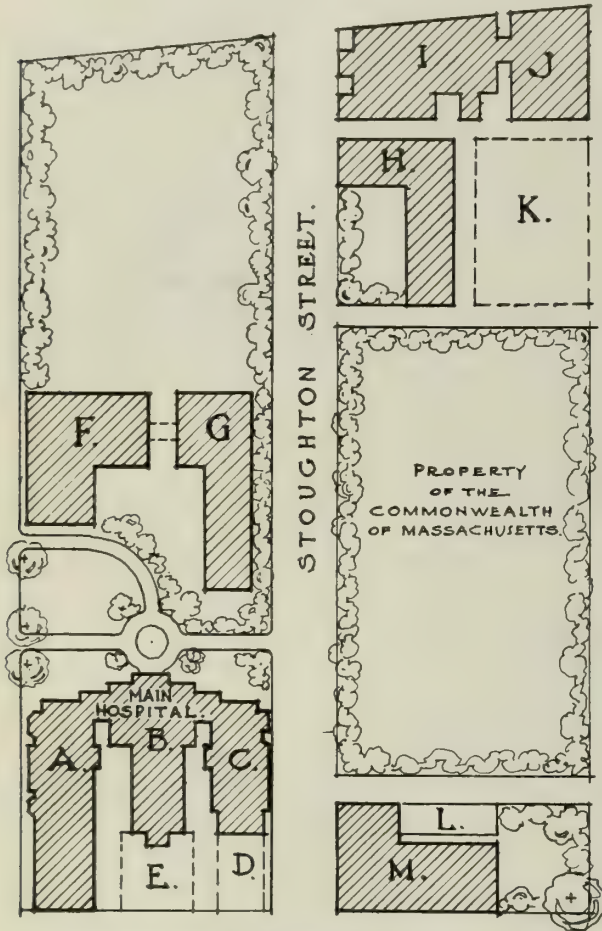


Fig. 6. Robinson Memorial of the Massachusetts Homeopathic Hospital. Ground plan.

- A. Surgical pavilion.
- B. Administration building.
- C. Medical pavilion.
- D. Proposed extension to medical pavilion.
- E. Proposed new operating building.
- F. Evans Memorial for clinical research and preventive medicine.
- G. Boston University School of Medicine.

- H. Vose Hall for nurses.
- I. Jennie M. Robinson Memorial maternity and out-patient department.
- J. Newton Hall for nurses. Site of possible future out-patient department.
- K. Service building (proposed).
- L. Ambulance station.
- M. Home for employees.

ment in the new structure. A separate entrance is provided for this department on Harrison avenue to the first floor, with elevator service to the second floor, in addition to the broad staircase leading thereto from a point back of the registry or control station, which is opposite the entrance. Rooms for treatment of women, children, eye, surgical, genitourinary, and neurological cases are provided on this floor. In a one-story wing over what was formerly the boiler room are the



Fig. 7. Robinson Memorial of the Massachusetts Homeopathic Hospital. Ground floor plan.

maternity department. A large sterilizing room is provided on this floor, which contains water stills for the purpose of supplying distilled water to all portions where required. There are special reheating devices in the delivery rooms below. There is also a room for obstetricians, with lockers and shower. The roof is arranged for a garden, protected by awnings, for use of ward patients.

The exterior of the building is of water-struck brick, with limestone trimmings. The solarium is of copper; on the front, at the fifth floor, the wall is set back 8 feet, forming an airing balcony for the private patients. The floor of the balcony and the garden on the main roof are of tile. The building, with the exception of doors and trim, is as fireproof as it can be made, and every room on the ground floor has

automatic sprinkling equipment. The interior finish, with the exception of the lobby and waiting room at maternity entrance, is plain, the effort being to secure simplicity, permanence, and utility. The color is a soft gray-green. The lobby and waiting room walls are of white English vein marble, the base and border of verde antique, and the floors of gray Tennessee marble. The walls above the dado are in plaster, painted a warm French gray, with simple decorations.

The floors in the out-patient corridors, the nurses' rooms, and the diet kitchen are of red tile. The walls of the diet kitchen and nurses' rooms are faced with the same material 7 feet high. White marble

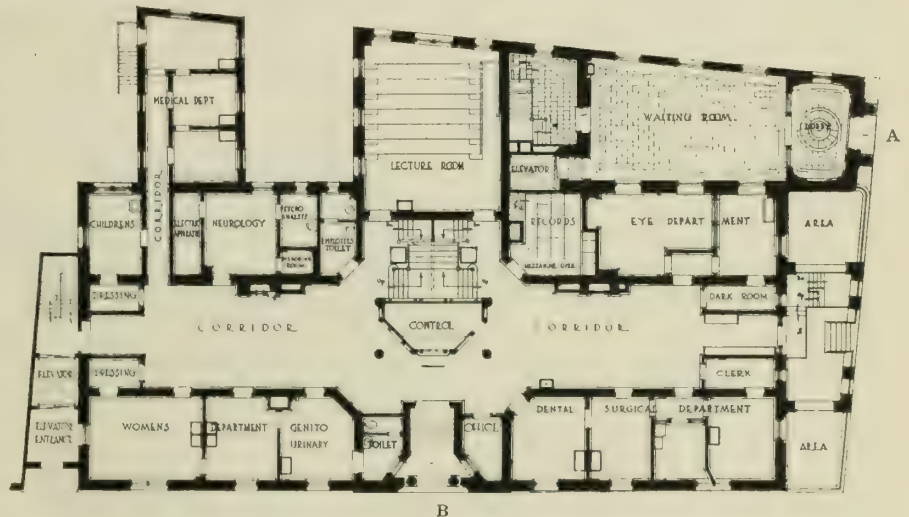


Fig. 8. Robinson Memorial of the Massachusetts Homeopathic Hospital. First floor plan. A, maternity department entrance; B, out-patient entrance.



Fig. 9. Robinson Memorial of the Massachusetts Homeopathic Hospital. Second floor plan.

Mosaic floors are used in the delivery and labor rooms, with gray Tennessee marble wainscoting.

Linoleum is used in the third, fourth, and fifth floor corridors, the private rooms on the fifth floor, and in the interns' and externs' rooms, with terrazzo bases 6 inches high on walls and 8 inches wide on the floors. Terrazzo floors are used elsewhere, and in large wards these were divided into panels by the introduction of strips of black marble Mosaic to break up the rather monotonous appearance of the material.

The corridor walls are light-buff, with a darker tone below 4 feet high; the nurses' rooms and

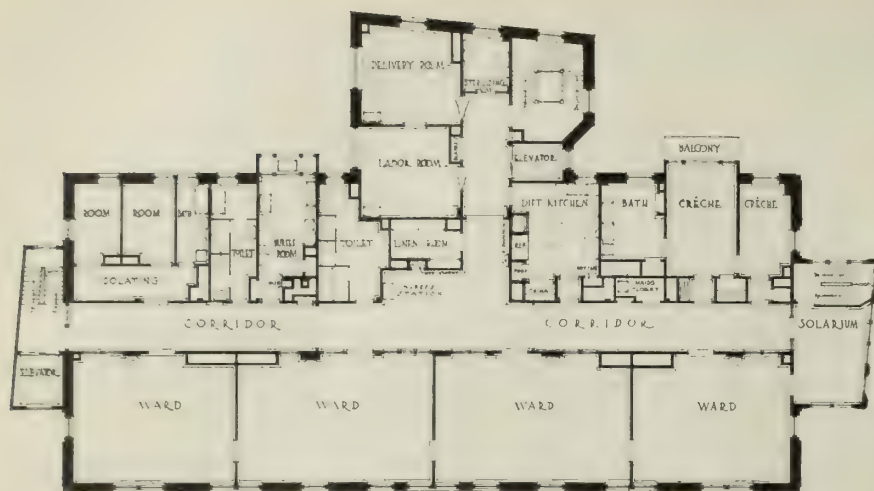


Fig. 10. Robinson Memorial of the Massachusetts Homeopathic Hospital. Third floor plan.

diet kitchen are buff above the tile; the wards and patients' rooms are light-green above a darker green dado; a light-gray was used in the delivery room, nurseries, rooms in the out-patient department, toilets, etc.

Our senses have been deadened to superlatives, but the phrase "equipped with all modern appliances" is the slogan of every new hospital and applies to this one as well. A few further details will complete the description.

The steam for heating is generated at the central plant and transmitted in underground conduit to the building. Refrigeration is by a small separate machine in the basement, cooling drinking water as well as ice boxes. Food is cooked in the kitchen of the main hospital and brought to the building by autotruck in insulated

containers. Special cooking for private patients can be done in the fifth floor kitchen. Waste and garbage are consumed by incinerators located in each nurses' room. The nurses and interns' calling system is of the latest obtainable pattern, and all private rooms are provided with telephone jacks.

The lighting fixtures are of special design, the special uses of each group of rooms being considered; semidirect fixtures, with a glass diffusing bowl and clear glass dome, are used in all patients' rooms and wards, and

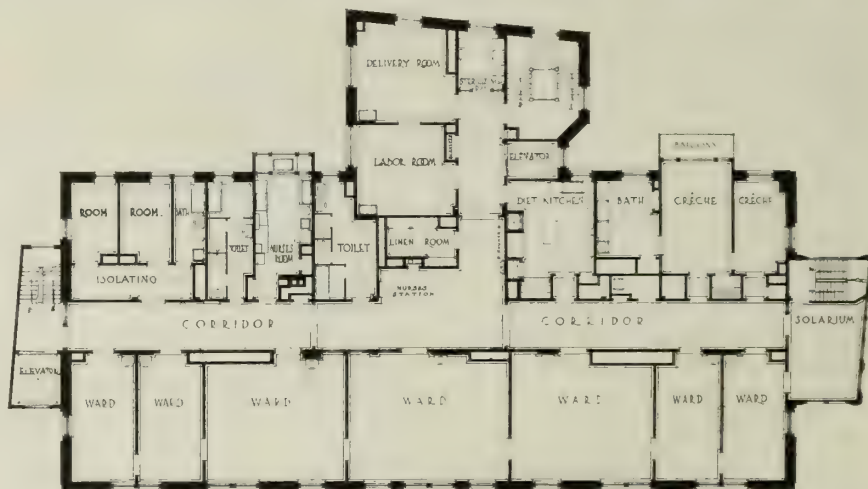


Fig. 11. Robinson Memorial of the Massachusetts Homeopathic Hospital. Fourth floor plan.

direct fixtures in all rooms other than those occupied by patients. The delivery and labor rooms are lighted by means of four pendant lights, with



Fig. 12. Robinson Memorial of the Massachusetts Homeopathic Hospital. Fifth floor plan.

a lower glass diffusing bowl and glass dust cover, with an adjustable deflecting shade, permitting regulation of light on the sphere of operations. The "flower bay" in the nurses' room permits of the watering and care of flowers when required, and the inner and the outer sash can be adjusted to regulate the temperature. Sash between corridors and wards are high enough to prevent looking in, and add cheer to the long and usually dark corridors.

Many other points could be mentioned, but it is sufficient to say that every effort has been made to provide for the comfort and welfare, not only of the patients, but of the physicians, nurses, and orderlies as well.

THE MEDICAL PROFESSION'S OBLIGATION TO THE PATIENT¹**In the Team-Work of the Hospital Prescribed by Present-Day Methods in Diagnosis and Treatment There Are New Obligations That the Profession Must Consider**

BY HENRY A. CHRISTIAN, M. D., BOSTON

AMONG the varieties of opinions held about most medical matters, there is one about which I fancy no dispute has ever arisen among physicians. This is, that the medical man owes it to his patients in and out of the hospital to give to them without stint the best service that he can render. Here lies the obligation of the medical profession to its patients. How to accomplish this is one of our continuous problems, for whose solution many different methods are advised.

When your secretary suggested that I take as my topic, "The Medical Profession's Obligation to the Patient Who Needs Hospital Care," I willingly assented, for, like you, I am interested deeply in how to accomplish the best care of our patients. My views as to the best methods may not be your views, and, yet, to present them must stimulate further consideration, which in the end will lead to progress.

No medical man can give to his patients the best product of medical knowledge unless he is a well-trained man. Our obligation to our patients begins, then, with the obligation to provide amply endowed, well-equipped, and adequately manned schools of medicine in which our future medical men may be trained. The hospital holds a large share in this, for there is a mutual obligation that exists between school, hospital, and patient. The hospital requires the existence of the school to train its interns and staff. The school without the hospital is as the carpenter without a tool. The patient is the cause of the existence of the hospital and school; were he not in need of medical service, the hospital and school would have no occasion to exist; the patient should be willing, then, to use himself for medical education in recognition of this circle of obligations. If these obligations exist, it is equally true that each of the parties to the obligation are benefited in this relationship—the patient most of all. To you, as hospital representatives, I would say, ally yourselves just as soon as you can with the best possible medical school; make no difficult conditions; a full and free offer on your part will benefit hospitals and patients. You have far too much to gain to justify quibbling over conditions of union. If you will run over in your minds the names of the hospitals of the world

which are most famous, you will find that they are largely teaching hospitals. In them patients have, on the average, the best service because the student, at his heels, is the greatest stimulus to careful observation and treatment of patients by the visiting physician and surgeon. Students in the wards furnish additional eyes for observation and more hands for work. As I go about the country I see far more inferior medical attention and careless nursing work in hospitals where there are no students than elsewhere. But you say, not every hospital can be attached to a medical school. That is true, but those so unfortunate as to be unable to do so can become teaching centers for house officers, nurses, and the practicing physicians of their community. If, as a hospital, you have not something to give to these, as a hospital you should shut up shop, for you are no longer a good hospital. If your staff does not contain men who can teach this group, then you have failed to get the best available men for your work. I often hear managers of hospitals complain because they secure only mediocre house officers and nurses of inferior quality. It seems to me that when this condition exists it means that you have an inferior visiting staff. Do not complain of your inferior interns and nurses; instead, ask for several resignations from your staff. Fill these vacancies with better men, to attract better house officers and better nurses. Realize that, if young graduates of medicine and prospective nurses do not care to come to you, the cause lies in a weak staff or an indifferently equipped institution.

A well-equipped, adequately manned hospital plant is another phase of our obligation to patients. Without equipment, your staff cannot work effectively; nor can you with ordinary equipment expect to retain the services of a high-grade staff. Obviously, too, patients receive the best professional service in hospitals with good equipment, and inferior service where equipment is inadequate. Too often do hospitals pretend to render a service for which they are not equipped. I do not regard as a hospital, in the proper sense of the word, any institution which is not prepared to carry out a large part of the methods of diagnosis and treatment, medical or surgical, now in use in hospitals, such as are attached to high-grade medical schools. This means comfortable wards and rooms, efficient nurses, a trained

¹One of the papers on "Team-Work" read at the meeting of the Catholic Hospital Association, Milwaukee, June 7-9, 1916.

dietitian, complete operating plant, x-ray plant, laboratories with various apparatus, resident house staff, and competent visiting staff, including specialists. Then, each hospital must be prepared to add equipment for new methods as they develop. Without these the so-called hospital is but a nursing home or place for surgical operations. These latter have their place especially in those communities in which hospitals are not possible, but it is dishonest for them to pose as hospitals and admit patients, expecting study and treatment of the hospital type. I regret to say that our terminology, as in use, does not distinguish between various grades of hospitals. There are many institutions calling themselves nursing homes, sanatoriums, etc., which are doing honestly all they pretend to do, and there are institutions calling themselves hospitals which, recognizing their limitations of equipment, make no pretenses and take only such patients as they can manage. Unfortunately, however, there are many hospitals, so-called, which are pretending to do diagnosis and complicated therapy for which they are not prepared. To these are admitted patients who believe they will receive a real hospital service. This is a fraud on the public, and should not be tolerated. There is need for hospital standardization, and this association should undertake such work. If you do, you, like all other hospital associations, will have to eliminate from your ranks a number of institutions, or classify them as associate members not entitled to membership, because they do not come up to your standards of what a hospital should be. Perhaps such an elimination might be very difficult for an association such as yours, but difficulties should not deter you from such a move. Most assuredly there were great obstacles put in the way of the classification of medical schools, and yet the work has been done with the result of enormous improvement in medical education. The same can and should be accomplished for hospitals.

Were I asked to express an opinion today as to the average greatest weakness of our American hospitals, I would say that it lies in an insufficient equipment for diagnosis and treatment other than surgical treatment. This is particularly true of the smaller hospitals—less true of the large metropolitan institutions. I think it can be fairly stated that American hospitals have better equipped operating plants for their surgeons than have laboratory and therapeutic plants for their physicians. I do not mean to imply by this that the surgeons have more than they need—rather that the physicians have less than they require. The laboratory, hydrotherapeutic, and

mechanotherapeutic apparatus, and the diet kitchen prepared to furnish accurately weighed diets, should bear the same cost relation to the medical service as is borne by the surgical operating rooms and surgical instruments. Ward equipment, number of house officers, x-ray plants, nursing force, etc., should be and generally are coordinate for medical and surgical services. If the hospitals of the country spent the same amount of money for the medical as they now spend for the surgical service, there would be a marked increase in the efficiency of hospital work, particularly along the lines of accurate diagnosis, and more skilled therapeutic management of non-operable conditions. I am inclined to think that the physicians themselves are responsible for existing conditions. They have not been, as a rule, so progressively aggressive as our surgeons. In many instances they have been slow to recognize the importance of utilizing newer laboratory tests and mechanical aids in treatment. Our lack of these therapeutic aids is very general, and probably is a cause for the success of many of the forms of medical quackery in America. To the visitor in a foreign clinic, one of the most striking things in contrast to our American hospitals is the greater expenditure of money for hydrotherapeutic, mechanotherapeutic, and electrotherapeutic apparatus, and for diagnostic laboratories, and the great usefulness of these in their management of their sick. It would seem that one of your obligations to the patients needing hospital care is to improve the equipment put at the service of the physician, as compared with the surgeon, without at the same time decreasing the facilities that the surgeon now enjoys.

Another thing that should be carefully studied by hospital associations is the question of the amount of time that can be demanded of the members of the staff. Modern medical methods are time-consuming. The brief casual ward visit is inadequate to render to the patient in the hospital what he should receive. If more time is demanded of the visiting staff, adequate ways of remunerating the staff members must be worked out. How this is to be done will, of course, vary with the nature of the hospital, relative number of pay and free patients, the size of the community, whether the staff is a limited one or whether the hospital is open to the physicians of the community who may care to send patients to the hospital, etc. The fundamental point is that large amounts of time cannot be with justice demanded of visiting staff unless directly or indirectly they receive remuneration for their services. On the other hand, if some means of securing this time is not worked out, the visiting staff necessarily

will neglect the patients, and the hospital will fail to meet its obligations to its patients. One way of obtaining better professional attention for the hospital patient lies in having a larger resident staff, some of whom remain in service for a considerable period of time, receiving a salary in addition to board and lodging. For the larger hospitals this sort of an arrangement is almost essential if the hospital is to remain an efficient institution. It seems to me certain that salaries for hospital staffs will soon come to be general rather than the exception. The out-patient staff, above all, needs to be paid.

If these conditions are met, then the institution can secure a high-grade staff, and demand of that staff a very considerable amount of work in the institution. The selection of this staff is an all-important matter. With the best of tools, good work cannot be produced unless the workers are competent. Careful selection of the staff is needed. Seniority promotion necessarily introduces stagnation into an institution. Any form of local limitation carries with it an inability to get the best available men. Your sectarian hospitals, more than any others, are handicapped in this matter just in so far as you allow religious beliefs to influence appointments. To the other handicaps, such as seniority promotion, the necessity of taking only local men on the staff, etc., from which all hospitals may and many do suffer, you have added the further limitation of sectarianism in just so far as you limit your staff to members of your own church. Often a man may be the best man available, and at the same time of the religious belief of a sectarian institution. Very often, however, this is not the case, and as you look about the country you see sectarian institutions of various beliefs carrying on their staffs men who must have been selected on account of their professional attainments.

Just this same principle applies also in the selection of head nurses, pupil nurses, teaching nurses, etc. The sisterhoods that conduct, in part, your hospitals are great blessings to you, for they bring to you conscientious workers, unsalaried, and so you obtain many workers at less cost than is the case with competing, nonsectarian hospitals. Necessarily, however, this system introduces the element of inelasticity and the tendency to employ in positions people not thoroughly suited for the posts. Thus often you must put square pegs into round holes, with the result that you have a misfit. This must be recognized as a defect in your system, against which you must be constantly guarding to reduce it to a minimum. I am speaking frankly on this subject from the point of view of an outsider who

has worked in institutions manned by members of Catholic sisterhoods. In my association with the work of a sisters' hospital I have come in contact with wonderfully efficient, effective women, and yet it must be acknowledged that in the same way I have seen women doing the wrong work; their unfitness recognized by their superiors, but their superiors confronted with the difficulty of finding a place for these unsuitable people elsewhere, and the difficulty of securing within the order desirable workers in their places. Every superior in a hospital must often be confronted with just this problem. How well they can meet the problem will be a large factor in determining the efficiency of the nursing and administrative side of your hospitals. Whenever this part of the institution deteriorates in efficiency, the patients must suffer proportionately, and the institution fail in this respect to meet one of its obligations to its patients. What I have just said about sectarian institutions, I have put to you in a personal way. I want to make it clear, however, that this is a fault no more of Catholic than of any other sectarian institutions. Methodist, Presbyterian, Episcopal, and Deaconess hospitals are all confronted with this same handicap.

Very many of the hospitals of this country have too expensive buildings. By this I mean that, of their available money, too much has been put into land and buildings and too little reserved as an endowment fund for current expenses. Beautiful buildings are highly desirable from an esthetic viewpoint, provided the institution can afford them. Even for these it might be remembered that costly trimmings are not so beautiful as plain lines delicately adjusted to perfect symmetry. It is not what is on the outside of a hospital building, but what is within—both brains and equipment—which makes for perfected service to our patients. Not the buildings, but the work done, will make or unmake the reputation of the hospital. I know of costly hospital buildings in which I should hate to be compelled to be a patient because of inefficiency within their marbled halls, while in contrast some of our best hospital service is rendered to patients in buildings of relatively small construction cost. I would say to those of you who are building new hospitals or making extensive new additions that you owe an obligation to your future patients to leave of your money an ample amount for current expenses, apparatus, staff, etc., for, if too large a proportion is spent on buildings, every patient within those walls will experience daily the result of your unwisdom because of lack of money to provide what is needed for his diagnosis, treatment, nursing, feeding, etc. Our ten-

dency in the past certainly has been the direction of proportionate overexpenditure on buildings, with consequent lack of money for current expenses and apparatus. It is surprising how great reduction can be made in the estimated cost of a group of buildings, without curtailing in any way their efficiency for caring for patients, if administrators, professional staff, and architects combine their efforts with the view to accomplishing the best provision for patients at a minimal cost.

Every hospital bears an obligation to teaching and investigation. I have already spoken of the value to the hospital of association with a medical school, or, failing in this, the importance of becoming a community teaching center. Members of a hospital staff should take an enthusiastic part in teaching interns and nurses, for, if this is not done, the patients will receive inferior service. Then, too, there is much value to the community in the education that patients in the hospital should receive. Where can better lessons be given as to personal hygiene than in a clean, well-managed hospital ward? This phase of our hospital work we often undervalue or even neglect. In it the social service worker is an almost indispensable aid, but nurses, interns, visiting staff, consciously and unconsciously, in their daily routine are carrying out an educational procedure for the patients effective in ratio to the efficiency of their work.

Every hospital, too, must be a place for medical investigation. Careful observation of hospital patients under conditions of disease and their reaction to forms of treatment is possible to every hospital, even the smallest. The accumulation of such observations, when well made, is of value as adding to our stock of human knowledge. By such work methods of treatment, etc., can be evaluated and improved. Often very important contributions to medical knowledge have come from small hospitals, and even from private practice. The spirit of inquiry in medical men is a powerful stimulus to progress, and, without it, stagnation is almost inevitable. Hospital medical investigation means, above all, careful observation. Careful observation, whatever its avowed purpose, will bring out new facts in every patient so studied. The results of observation determine diagnosis; the more complete and the more accurate the observation, the more nearly correct will become the diagnosis. Treatment, in a large measure, succeeds in ratio to the accuracy of the diagnosis. The patient seeks the hospital for diagnosis and treatment, and so medical investigation within the hospital walls, besides stimulating progress in the staff, is of direct ben-

efit to the individual patients. So you, as hospital officers, should take steps to encourage and make possible medical investigation in your institutions.

Catholic hospitals have had a long and honored past. They have contributed much to medical science and medical progress. Your sisterhoods have brought untold alleviation to sick and suffering humanity. For this work I salute you. Your past achievements bring to you a heavy obligation for continued growth and improvement. This association can accomplish much in furtherance of this development if, with honest criticism of yourselves, you face the future with the determination to mold your hospitals to the requirements of the present and the progressive development of medical science and practice. May you ever keep in the forefront of the great struggle against sickness and disease.

The Surgeon's Responsibility

The surgeon who hesitates to direct the necessary treatment is like the general who abandons his place on the eve of a battle, or like the fire chief who retires from the ground when he finds there is a real conflagration. The surgeon has no right to allow this responsibility to rest on the shoulders of any other person, it matter not how broad these shoulders may be. He must never act purely on any other person's say-so, however eminent, positive, or persuasive that person may be. The surgeon's own shoulders should bear the burden, and he must see to it that they do.

It is the mandate of our calling that it shall be so. This mighty responsibility is a splendid dignity. If a surgeon's shoulders are not sufficiently broad, strong, and able to carry great personal responsibility, such a man belongs to some other calling. The trials and triumphs of surgery should not be for him.—J. Chalmers da Costa in the *Pennsylvania Medical Journal*.

Silence Zones for Boston Hospitals

Silence zones covering hospitals of fifty or more beds went into effect in Boston on June 1. The City Council of Boston, following a long delay, has passed the following ordinance:

The commissioner of public works shall, at the request of the authorities of a hospital, place and maintain a sign or signs displaying the words, "Warning! Hospital! Make No Noise!" at such points as he may determine on public streets and places in the vicinity of hospitals accommodating more than 50 patients. No foot traveler, driver or vehicle, motorman of a street car, or operator of a motor vehicle shall make any unnecessary noise in the vicinity of such hospitals as to unreasonably disturb patients therein.

All hospital buildings in this climate should be erected so that as great a surface as possible should receive direct sunlight, a rule which has been observed in several of our best hospitals, but, I am sorry to say, passed over in some of those most recently constructed. Window blinds can always moderate the light of a light ward, but the gloom of a dark ward is irremediable.—Florence Nightingale.

SAFEGUARDING THE HOSPITAL'S MOST VALUABLE FOOD—MILK

Pasteurized Milk Is Safest and Also Cheapest—Certified Milk Has Limited Guarantee—Proposals For Bettering Milk Supplies in Hospital and Home

By CHARLES E. NORTH, M. D.

AUTHORITIES claim some 8,000 hospitals for the United States, but out of that vast number how many are giving the proper attention to their milk supply? The majority of institutions are prone to accept the word of the producer, and a personal investigation or the simple routine laboratory tests are not regarded as essential. A few hospitals maintain pasteurizing plants, but how many of these plants are efficient? In many instances the operators are devoid of even the essential elementary principles of pasteurization.

"Clean milk" should be the hospital slogan. Decency distinguishes humans from animals; decency adds pleasure and appetite to the food, and cleanliness contributes most to decency. Milk may be safe because it has been boiled, but may be indecent because it is filthy.

A little calf can run into any cow stable and take its dinner from a cow and run out again with certified milk in its little stomach. Nature has protected the calf against dirty barns and other sources of milk contamination by a method of milk delivery that prevents such contaminations from occurring. The dairy farmer can imi-

dirty milk inflame the intestines of children. Clean milk should not be dumped into the same tank with dirty milk. The clean dairy farmer should receive more money for his product than

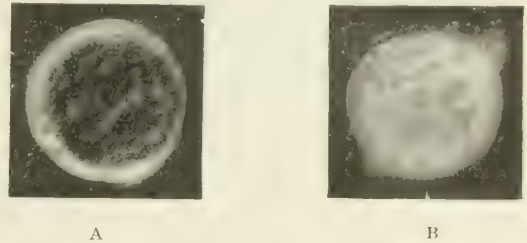


Fig. 2. Dirt from milk. Dirt strained out of two kinds of milk by the use of small cotton discs, showing a very dirty milk (A) and a very clean milk (B). The dirt is mostly manure, and contains many millions of bacteria. Such manure often carries the germs of bovine tuberculosis.

the dirty dairy farmer. Milk dealers in several cities have already established clean milk stations in the country, where payment to the producer is based on the cleanliness of the milk. In addition to the regular market price of the stations, premiums are paid, not only for butter fat, but for milk containing a small number of bacteria. Clean milk is winning its fight and dirty milk is losing ground every day. Clean hospitals buy clean milk.

CLARIFICATION

DEFINITION.—Clarification means centrifugally cleansing milk of the udder waste and any foreign and impure matter it may contain, without affecting its butter fat or other normal constituents. At the present time most market milk is dirty, being contaminated with foreign matters consisting of particles of dust, dirt, hay, cow feed, cow bedding, cow manure, hairs, dandruff, insects, etc. Some of these float on the surface and others settle to the bottom as sediment.

The dairy cow herself contributes a peculiar form of contamination. The udder is constructed like a sponge. There is a constant shedding of waste tissue from the lining of the udder, and this udder waste often includes the products of udder inflammation. Such inflammations are so common that they are present in some form in practically every dairy herd. Even when there is no external evidence, there is often internal inflammation, discharging its products with the milk.

Udder waste and blood, pus, and bacteria from udder inflammations are fortunately heavier than milk, and most of the foreign dirt is also heavier

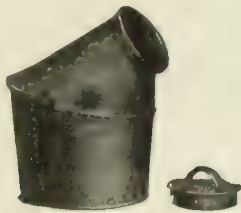


Fig. 1. Covered milking pail with small mouth. The opening is 5 inches. The position of opening is correct for milking, and greatly reduces the chance of vertical droppings of dust into the pail. The use of this pail instead of the ordinary one will reduce the bacteria content 90 percent in most barns.

tate the calf by using a milking pail with a small mouth, which prevents dust and dirt in the barn from dropping into the milk during milking time.

A clean dairyman can produce clean milk anywhere. A small-mouthed pail to keep out dirt, plenty of boiling water to keep pails and cans sterile, a tank of ice water to keep milk cold—these three things alone will produce wonderfully clean milk on any farm. Where there is no ice, milk can be delivered twice daily to a station where ice is available.

One grain of stable dirt has been found to contain 32,875,000 bacteria. Bacteria are tiny plants. Dirty milk contains millions of them, and clean milk contains only a few hundreds or a few thousands. The millions of bacteria in

than milk. Consequently, when milk is passed through a clarifier, all these things are thrown out by the proper application of centrifugal force, so that they remain in the machine as a slimy mass, which is called "clarifier slime." The amount of such slime removed from milk is about



Fig. 3. Sediment and slime from milk. The two bottles on the left show sediment and slime removed by the clarifier from milk of cows with normal udders. The two bottles on the right show sediment and slime removed by the clarifier from milk of two cows with sore udders, which caused a septic sore throat outbreak, including 669 cases, with 14 deaths.

one pound to every 6,000 quarts (which would equal for New York city's milk supply 333 pounds daily, or over one ton per week). An inspection of the dark and bloodstreaked slimy mass instantly convinces the observer that market milk is rendered much more sanitary by its removal. Clarification adds to the safety of raw milk because, along with blood, pus, and waste tissue, it removes a large number of the bacteria which cause udder inflammation. Such bacteria may inflame the throats of adults or the intestines of infants. Clarification adds to the decency of all milk, raw or pasteurized, because it cleanses milk of all gross impurities.

PASTEURIZATION

DEFINITION—Pasteurization consists in heating milk to such a temperature for such a length of time as will destroy the most bacteria with the least damage to the milk itself.

TEMPERATURE

The substances composing milk are damaged at temperatures higher than those temperatures at which disease bacteria found in milk are killed. The space between, called the "neutral zone," permits selections of a number of good temperatures and periods for pasteurizing milk without affecting its food value, but with a guarantee that the bacteria of disease will be destroyed. In practice, 145° F. for thirty minutes has been agreed on as best by most authorities.

WHY MILK SHOULD BE PASTEURIZED

1. *Raw milk causes infant deaths.* Twenty-five percent of all deaths are of children under 5 years of age. More children die from intestinal disease than from other causes. Children's food

is chiefly milk. Dirt bacteria, harmless to adults, irritate and inflame the intestines of children. Pasteurization kills 99 percent of the bacteria in milk.

2. *Raw milk causes septic sore throat.* Septic sore throat is a violent form of tonsillitis. It is often followed by acute articular rheumatism, erysipelas, peritonitis, endocarditis, and other serious inflammations. Cases from one raw milk supply as follows:

Boston, Mass.	1,043
Boston, Mass.	227
Chicago, Ill.	10,000
Baltimore, Md.	602
Cortland-Homer, N. Y.	669

The disease attacks adults chiefly, and there are often deaths. Bacteria in sore udders of cows closely resemble bacteria found in these sore throats. Pasteurization kills the bacteria producing septic sore throat.

3. *Raw milk causes typhoid fever.* Trask has collected records of 317 outbreaks of typhoid traced to raw milk. Here are a few cases from one raw milk supply:

Glasgow, Scotland	500
Cologne, Germany	270
Port Jervis, N. Y.	59
Springfield, Mass.	182
Oakland, Cal.	262
Montclair, N. J.	107
Stamford, Conn.	307

Pasteurization entirely destroys the germs of typhoid.

4. *Raw milk causes tuberculosis.* One hundred and ninety-one tuberculosis cows were taken out of the most celebrated certified dairy herd of 632 animals in November, 1914. In December 72 tuberculosis cows were found in a herd of 86 in a model dairy where every expense had been incurred and precaution had been taken. Tuberculosis is very common, and the majority of dairy herds contain tuberculous cows. Authorities estimate that 75 to 90 percent of human beings have tuberculosis at some time during their lives. Most of this is human, but some of it is bovine. Tabulation by Park & Krumweide of 1,038 cases of tuberculosis showed the following:

	Cases	Bovine	Percent
Adults over 16 years.....	686	9	1.3
Children 5 to 16 years.....	132	33	25
Children under 5 years.....	220	59	27
Total.....	1,038	101	10

Pasteurization kills the bacteria causing tuberculosis.

5. *Raw milk causes scarlet fever and diphtheria.* One hundred and twenty-five epidemics of scarlet fever due to milk have been collected by Trask.

The old objections to pasteurization are as follows:

Substitute for cleanliness. This is only true if the public and the health officers allow it. Such

abuse of pasteurization can be entirely controlled by testing the raw milk before it is pasteurized. All milk should first be decently clean. Grades and standards and regulations enforced by the health officer can do this.

Affects digestibility and food value. Experimental evidence is difficult to obtain. Fortunately New York city has for the past three years carried out a gigantic experiment in infant feeding at its fifty-one municipal milk depots, where babies are fed the year round to the number of 18,000 daily in summer and 16,000 daily in winter. For three years all of this milk has been pasteurized. Records have shown that the babies have gained weight, have kept well, have shown no signs of rickets or scurvy, and in every way give evidence that pasteurized milk is not inferior in food value or digestibility to raw milk. The death rate among infants during this period has been reduced from 125 per thousand births to 94 per thousand births, which places New York city in the lead of any large city in the world in the reduction of infant mortality.

PASTEURIZATION BY THE LARGE HOSPITAL

Pasteurization is performed on a large scale by some of the larger hospitals through the use of several types of machinery, which not only quickly heat the milk to the proper temperature,

or lower. Attempts are now being made to pasteurize milk in the bottle, and several kinds of machinery have been invented for this purpose, some of which have already been put into successful operation. Pasteurization in the bottle is the ideal method.

Considerable research work has been carried on by hospital superintendents, one of whom, Dr. John A. Hornsby, ex-superintendent of the Michael Reese Hospital, Chicago, Ill., has designed and constructed an efficient and practical pasteurizer, using the Ehrlenmeyer flasks in preference to bottles. This apparatus is described in detail in Dr. Hornsby's book, "The Modern Hospital."

PASTEURIZATION BY THE SMALL HOSPITAL

Where pasteurized milk cannot be purchased, or where for other reasons it is desirable to pasteurize milk in the small hospital, the process can

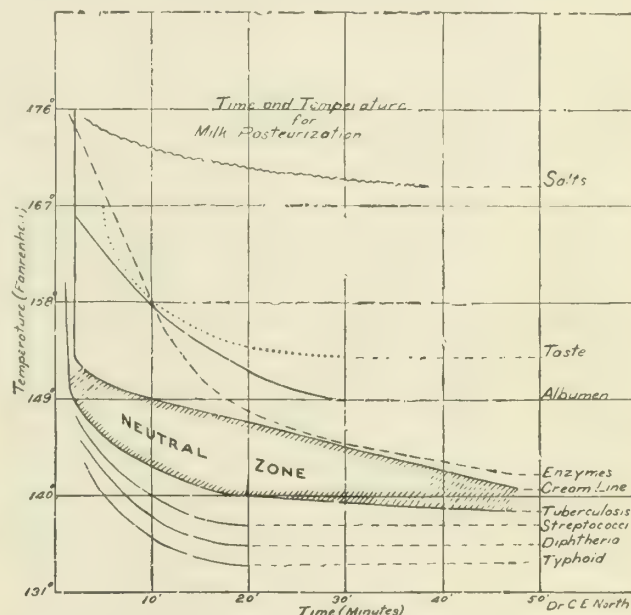


Fig. 5. The effect of heat on milk. The chart shows the effect of heat on milk and on bacteria. The substances in milk are damaged at temperatures much higher than the temperature necessary to kill the bacteria of disease. Between the two is a neutral zone, in which are many temperatures to which milk can be heated without damage, but with a guarantee that the bacteria are destroyed, 145° F. for thirty minutes being recommended by the highest authorities.

be easily performed without special apparatus by gradually heating milk to 145 degrees and holding it there for one-half hour, after which it must be covered and kept cold. It is necessary to use a thermometer to be sure the milk is properly heated. Glass bottles of milk can be placed in cold water in a kettle and the water gradually heated to the right temperature. The thermometer should, of course, be placed in the milk bottle, but the temperature of the water should be tested until the milk reaches the right temperature. A double boiler, sometimes called a rice boiler, is another means by which milk can be easily pasteurized at home.

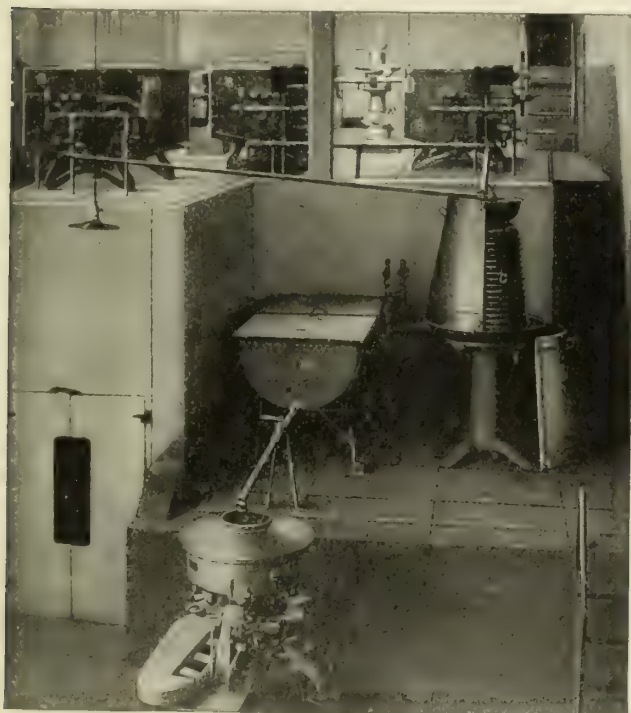


Fig. 4. A complete milk plant. (A) milk clarifier, (B) pasteurizing and holding tanks, (C) milk cooler, (D) storage tank for cold milk, (E) bottle filling and capping machine.

but which hold it in a heated condition for half an hour before it is run over coolers, which quickly reduce the temperature to 40° Fahrenheit

There are also several very good types of home pasteurizers on the market, which are comparatively cheap and easy to operate. The pasteuriza-

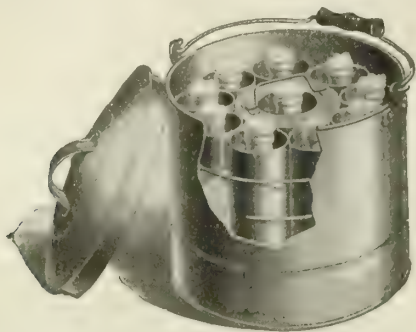


Fig. 6. A home pasteurizer. This simple apparatus is recommended for use in the home where it is not possible to procure pasteurized milk from dealer.

tion of milk in the small hospital gives a guarantee that no disease can enter the wards through the milk supply.

CERTIFIED MILK

Certified milk is ideal in the matter of cleanliness and decency, and leads all other milks in these respects. In most cases it is produced under precautions identical with those carried out in surgical operations. In the matter of cleanliness, certified milk has taught the milk industry a great lesson, and has been chiefly valuable because of its influence in improving sanitary conditions in the entire industry. In the matter of safety, certified milk cannot furnish a guarantee. Not only has bovine tuberculosis been constantly found present in the dairy cows of certified herds to some extent, but occasionally it has been found to a very large extent. It has been even more difficult to keep dairy cows free from udder disease, and sore udders are dangerous to the milk consumer as the cause of septic sore throat. Scarlet fever, diphtheria, and typhoid fever have broken out among dairy employees, and have been traced to certified milk or dairies operated under similar clean conditions. The result is that public confidence in any raw milk, no matter how clean, has been shaken, and the leading milk authorities now believe that even the best raw milk is unsafe and should be pasteurized.

In the matter of cost, certified milk is too expensive. The cost of operation of certified dairy farms is excessive compared with the small number of quarts of milk produced. Every quart carries a tax of from 5 to 10 cents above the normal price. It has been repeatedly demonstrated that at the same expense for sanitary supervision, and under more businesslike conditions, thousands of quarts of milk can be produced clean and decent enough to conform to all demands at only an increase of 1 cent per quart in price.

Much milk is now on the market at 10 and 11 cents per quart which is practically as clean and decent as certified milk.

MILK FOR THE HOSPITAL

In selecting milk for hospital use from the variety of milks on the market, there are three matters of chief importance to be considered. These are safety, decency, and price. In the table below are mentioned several kinds of milk sold in New York city and ordinary raw milk. The character of each is set down in the three respects mentioned, using the number of bacteria as indication of decency.

TABLE 1. KINDS OF MILK FOR SALE

Milk	Safety	Decency (bacteria in haw product)	Price, cents
Certified.....	Medical Veterinary inspection	10,000	15-25
	Sanitary		
Grade A.....	Pasteurized in bottles	200,000	10
Grade A.....	Pasteurized in bulk and bottled.....	200,000	10
Grade B.....	Pasteurized in bottles	1,000,000	9
Grade B.....	Pasteurized in bulk and bottled.....	1,000,000	9
Grade C.....	Pasteurized in bulk and canned.....	over 1,000,000	7
Ordinary raw milk.....	Occasional inspection	No standard	8

Safety comes first, and is more important than decency or price. If perfect milk scores 100 points, it would be fair to allow 50 for safety and 25 each for decency and price. There are different degrees of safety and decency. The different prices also affect usefulness of milk, for low prices mean wide use, while high prices restrict usefulness. These degrees of safety, decency, and price can be tabulated as follows:

TABLE 2.
Points for safety.
Perfect, 50.

Pasteurized in bottles.....	50
Pasteurized in bulk and bottled	45
Medical	
Veterinary inspection.....	30
Sanitary.	
Scoring farms	25
No inspection	0

TABLE 3.
Points for decency.
Perfect, 25.
Bacteria in raw
material.

10,000—25	
100,000—20	
200,000—19	
500,000—10	
1,000,000—5	
Over 1,000,000—0	

TABLE 4.
Points for price.
Perfect, 25.

9 cents or less.....	25
10 cents	20
11 cents	15
12 cents	10
15 cents	5
20 cents	0

Clarification would add 5 points to decency of all milk, and in the case of raw milk would add 5 points to safety.

If now we put down opposite the milks in table 1 the number of points allowed for safety, decency, and price in tables 2, 3, and 4, we get the following:

TABLE 5. VALUE OF DIFFERENT MILKS.

Milk.	Safety score.	Decency score.	Price score.	Total score.
Grade A.				
Pasteurized in bottles.....	50	19	20	89
Pasteurized in bulk and bottled.....	45	19	20	84
Grade B.				
Pasteurized in bottles.....	50	5	25	80
Pasteurized in bulk and bottled.....	45	5	25	75
Grade C.				
Pasteurized in bulk and canned.....	45	0	25	70
Certified (raw)	30	25	5	60
Ordinary raw milk.....	0	0	25	25

From the table it appears that grade A pasteurized milk scores 89 points, and has the highest public value of all milks. This is because its

safety is guaranteed by pasteurization, it is decently clean, and can be sold at a moderate price. In short, for 10 cents per quart it is possible to get a milk that is decently clean and thoroughly safe. Ten cents makes it possible to pay the dairy farmer a premium for cleanliness, and it also pays the dealer for extra care in handling and in pasteurization. The cost of cleanliness and safety is only 1 cent added to the regular market price.

MUNICIPAL MILK CONTROL

No city today feels itself safe unless it possesses a pure water supply. Water is a public question. Where water is impure, public opinion demands that the municipal authorities take steps to remedy the evil. In like manner the milk supply is a public question, and should be controlled by public authorities. The danger to the health of citizens from milk is greater in many respects than the danger from water. In taking control of the milk supply of a city or town, ideal conditions cannot be established at once, but complete control must be approached step by step as follows:

1. *Milk laboratory.* The first step is installation at an expense of only a few hundred dollars (\$300 to \$500) for apparatus of milk laboratory to test milk for bacteria. Such tests can be made by a young man or woman at moderate salary. They give the best kind of information as to condition of milk and show which is clean and which is dirty.

2. *Pasteurization.* When water is impure, the public demand that it be filtered and sterilized. Over 600 cities in the United States and Canada, including New York city, Philadelphia, Jersey City, Toronto, Buffalo, etc., are now sterilizing water with chlorin. Pasteurization can be quickly applied to all milk either by the milk dealer or by the city itself, and it at once protects all milk consumers against disease. For the sake of safety, it should be required and regulated by municipal ordinances.

3. *Bottling.* Retail milk should be bottled under sanitary conditions, and dipping of milk from retail wagons prohibited.

4. *Grades and standards.* The final step is the establishment of definite grades and standards for milk. These relate especially to the sanitary character of milk before pasteurization. Their object is to identify clean and dirty milk, and label them so that the buyer may exercise choice. Milk grades are recommended by the Commission on Milk Standards, consisting of twenty of the leading health officers and sanitarians of the United States and Canada. Their report grades milk into three grades—A, B, and C—with bac-

terial standards for each. It has been indorsed by the leading national associations of health officers, physicians, veterinarians, and milk dealers, and it is published by the United States Health Service. The grading of milk gives official recognition to the clean milk producer, establishes a market for clean milk, and gives a market value for cleanliness. New York city has been the first



Fig. 7. The different grades of milk. 1, certified; 2*, grade A, pasteurized; 3, grade B, pasteurized; 4, ordinary raw milk (dipped).

to grade its entire milk supply in this way, and all bottled milk is labeled A or B. This system has already proved to the municipal authorities its superior value over all other means for controlling the milk supply.

Hospital administrators should carefully investigate the source of the hospital supply both by personal visits to the dairy farms and by laboratory tests. The microscopical and chemical examination of milk can be conducted and accurate results be obtained by any good laboratory technician. The routine methods of analysis in vogue are simple in procedure, but require considerable care and accuracy to produce dependable results.

LESSONS IN THE HOSPITAL

Injured Immigrants Are Taught English in Industrial Institution During Convalescence

Daily instruction in English is given by the Cleveland-Cliffs Iron Company at Gwinn, Mich., to foreign-born workmen who, because of injuries sustained, are confined for some time in the company's hospital. The necessary texts and material are brought into the wards, and instruction is given for forty-five minutes or more each day. The teacher then assigns sufficient individual work to keep the patients fairly well occupied for the balance of the day. Doctors and nurses, who are delighted to have the men occupied in this way, encourage their patients and splendid progress is made. It is claimed that this work keeps the convalescents contented and happy in their enforced idleness.

Although in badly constructed hospitals, or in countries where fuel is dear and the winter very cold, artificial ventilation may be necessary, it never can compensate for the want of the open window.—Florence Nightingale.

THE SMALL COMMUNITY HOSPITAL—ITS FINANCES¹

The Building Fund and How Raised—The Fund For Permanent Support—Essentials For Financial Success—The Whirlwind Campaign—The Value of Accurate Accounting and the Publication of Straightforward Figures

By JOHN ALLAN HORNSBY, M. D.

IN step with the business methods of our time, hospital administrators and trustees are thinking in terms of system and mathematical accuracy, and they are even attempting to apply the principles of business to their institution operations. While such a motive and such an attempt can be carried too far, and can be hurtful if persisted in beyond a reasonable point, yet it is highly necessary that accuracy and order shall prevail in hospital administration.

Of course, the place to begin is at the very outset of any enterprise, and this is true when a small community hospital is to be thought about, just as it would be true in a great manufacturing organization, and it is quite certain that if we begin right and plan right, and make our financial arrangements properly, and provide against untoward emergencies, we are quite unlikely to get into financial straits and land on financial rocks with an enterprise that primarily and of its own merit ought to have been successful.

There are two hospital funds, and these two should be kept entirely separate and distinct; one is the construction or building fund, and the other is the fund for permanent support. Last month we pictured the initial proceedings for the creation of a community hospital, the meeting of a group of interested people, their division into committees, the duties of these committees, the creation of the organization, and we led up to the collection of funds, and the question was mooted last month as to the most desirable source or sources of these funds.

In a large community, groups of people having certain interests in common may be appealed to for the creation of hospital funds, but in a small town or in a rural community the whole population must be interested, because otherwise the number of supporters of the institution would be too small; besides that, everybody in a small community needs the service of the one hospital intended to be built, and their influence and support, ever so small, ought to be valuable. That support sometimes might be so small as to be insignificant in the affairs of the institution, but the need of the person making such contribution might be extremely great at almost any time, and there might

be embarrassment if he was not in accord with and a participant in the support of the hospital. Therefore, everybody in a small community ought to be interested in the community hospital, and the only way to secure such interest is by personal approach, and, of all methods of approach for the collection of funds, the personal and direct method, made by members of the community itself, is far preferable. There is no way better than to secure the voluntary services of a large number of men and women in the community as members of a subcommittee on finance. In large cities such a committee would be made up of individuals representing the different lines of business, and to a certain extent this same plan can be followed even in a small town, as, for instance, two or three members of the committee could represent the farmers in the vicinity; two or three other members could represent the merchants in the town; other members could represent the professional people, such as doctors, lawyers, engineers, architects, if these professions are represented; and still other members could represent the wage-earning members of the community who work in the town. Sometimes such a finance committee would better be divided up according to districts, and in that case the members would be selected from the different neighborhoods of the town.

The best plan of all is for the general committee on finance, or the self-appointed group who are taking the initial steps toward the creation of the hospital, to sit down with a list or a census of the population before them. There should be on such a committee all the bankers in the town and some of the merchants, because these men will know the financial standing or rating of the people of the community. The work of this committee should consist of arbitrarily setting down against the name of each head of a family in the community a figure representing the amount of money the committee feel that the person ought to or might be able to contribute. After this list is completed, those whose names are on it should be classified, as, for instance, one list would contain the names of those who might contribute \$5,000 or over; another class would consist of those who might contribute between \$1,000 and \$5,000; another class those who might contribute between

¹This is the second of a series of six papers on "The Small Community Hospital—Its Creation, Maintenance, Organization, and Administration." Next month, "Planning the Small Community Hospital."

\$500 and \$1,000, and so on down until the \$5 and \$10 contributions were covered in a class of their own. Then the subscription list should be made out to conform with these classifications; in other words, it would be poor policy to allow an individual to present a subscription list to a person who should and would sign for \$50 and then present that same list to someone who ought to give \$1,000. Therefore, it sometimes is a good plan to divide up the finance committee or the collection committee according to the amounts that the members will solicit. For instance, a banker and a doctor and a merchant will take out a list and undertake to see only those who are expected to contribute the largest amounts; another committee would take the next largest, and so on down.

It is a good thing not to mix the two funds, and attempt to collect both or to secure guarantees for both at the same time. The fund for building the hospital is the first fund to be arranged for, and it ought to be cleaned up, so far as the subscription lists are concerned, before the supporting funds are brought up for discussion. Otherwise a donor who was subscribing \$1,000 for the building fund, for instance, would feel himself unable to give that \$1,000 at the outset and then agree to give \$100 a year for ten years; but, after he has already subscribed his \$1,000 and the campaign grows warm for the permanent support of the hospital, it will not be so difficult to get him to make a separate contribution for its permanent support.

There is one more thing about this building fund. There should be no attempt to provide for the immediate collection of the whole fund, but some such arrangement as this might seem advisable; that those who contribute \$50 or less would be expected to make immediate payment, those who contribute still larger amounts might be given a little longer time and a greater number of payments in which to clean up their indebtedness, but all the contributions should be reducible to negotiable notes, and they should be of such character that the local bank would be willing to discount them at a reasonable rate, so that the hospital could immediately secure its cash fund for building and equipment purposes. If the subscription list is not legally negotiable, then it is not of the right character to permit the hospital board to rely on it. In other words, it would be practically worthless, and the board would have no right to assume the collection of moneys in which the financial people of the town had no confidence.

Up to this time we have been thinking of the work incident to the collection of the funds for the hospital being done by volunteer members of

the community, with our mind rather bent on the idea that the women of the community would collect the larger number of subscriptions.

THE WHIRLWIND CAMPAIGN

Of late years another factor has come into hospital activities—viz., the whirlwind campaigner for the raising of hospital funds—and there is a great deal to be said about the whirlwind campaign and about those who are engaged in that business. There is no doubt that one who has been trained by experience in the creation and conduct of a campaign to secure money can do it better, and will get more money promised, than the members of the community itself who have not had such experience; but there is an open question whether the large percentage that these whirlwind money raisers charge for their work will be an offset to the additional money that they would be able to raise; and yet these campaigners are obliged to charge large percentages for their services; they are obliged to pay a good many expenses, and they indulge in extravagances that the members of the community would not think of, such as the hiring of great numbers of automobiles, the giving of many lunches to many people, and all sorts of campaign dodges to create enthusiasm. Those who are thinking about obtaining their funds by the employment of a whirlwind campaigner ought to be definitely assured as to just what the hospital board is going to be expected to pay. Usually the employed agent charges a percentage for his own work, and out of that he pays no expense, except his own personal bills, and all campaign expenses become an additional tax against the fund proposed to be raised; in other words, if the hospital were going to raise \$100,000 and the paid campaigner charged 15 percent, he would get \$15,000 net, excepting that he would pay his own hotel bill and transportation to and from the town; and if there were lunches to be paid for every day at noon for ten days, and large automobile or carriage bills, and expenses for banners, clerk hire, meeting places, etc., these expenses would have to be paid for by the hospital board in addition to the 15 percent, some campaigners do not charge as much as 15 percent, others charge more, but the amount, whatever it is, added to the necessary expenses of such a campaign means a great deal taken off the fund, which, after all, is contributed by the people of the community.

There is no doubt that some of these whirlwind campaigners are honest, conscientious, painstaking, and effective agents, and that they have proved satisfactory in many communities, but the reverse is also quite true; therefore, those who

are thinking about the collection of funds in that way had better be extremely careful whom they employ and the terms of employment.

One of the most unsatisfactory effects of the whirlwind campaign is the bad taste that it sometimes leaves in the mouth of the community after the campaign is over. Generally speaking, the campaign agent will want to start out with a good number of large contributions ostensibly because of the influence of these contributions at the outset of the campaign. Sometimes the agent wants to be paid his percentage for these contributions, none of which he has had any part in collecting or arranging for, and which have been provided for his use by the hospital board or some of its members. Unless there is a definite and previously arranged agreement about the agent's pay for these early contributions before his campaign opens, they give rise to trouble. Another source of trouble is the character of the campaign sometimes conducted. After the enthusiasm has been worked up to a white-heat, and the volunteer captains and their various crews are out in the field with their subscription lists, many questions will be asked by those who are approached for contributions. One of these questions, and perhaps the most important, concerns the character of the hospital—whether it is to be dominated by a religious sect or fraternal order, or members of some particular nationality transplanted in the community from abroad—and it is so easy to answer such a question according to the wishes of the questioner. If he should happen to be a Protestant, the inclination behind a whirlwind campaign would be likely to inspire an answer that the hospital was to be a Protestant institution; if he were a Catholic, the person attempting to collect a contribution would be most likely to be sure that the institution was to be conducted as a Catholic hospital, and so on down the long gamut.

Then the question of the permanent board of trustees, the number and character of its membership, would come up for solution in the same way; that is, those asked for subscriptions would want to know who were going to be the members of the board, and it has happened that the person with the subscription list would say, "I don't know, but I will ask," and the person he asks is the active campaign manager, who is working for a fee, and the answer is quite likely to be made just exactly to fit the individual making the inquiry. And many a contribution has been signed to a subscription list predicated on the statement of the person with the list that the prospective donor was slated for membership on the board of trustees. Of course, after the campaign is all over and the enthusiasm has oozed out, this subscriber is likely to

wake up and find that it was never the intention to make him a member of the board of trustees, and he, on the other hand, is quite likely to repudiate his subscription—that has happened.

The writer of this paper has been criticised many times for his attitude toward the whirlwind campaigner, and he has been asked repeatedly to make his criticism constructive and not to condemn a system without offering a substitute. Unfortunately, that is exactly the situation. The only substitute that can be suggested for the whirlwind campaigner is the voluntary community itself, unaided by trained direction. Some day, perhaps in the not far distant future, this question of the raising of funds for hospitals and similar institutions will be settled by the creation of perhaps some national organization employing trained agents, who, under salary from the organization itself, can be sent into the community that wants a hospital and work wholly for the good of the community itself and without reference to any financial interest of their own, because in such a case the hospital board would engage with this corporation to pay a certain fixed sum without reference to the amount of money collected. Such a system would be ideal because it would provide trained aids in a community desiring to raise funds, and there would be no stimulus to improper activities on the part of those engaged to help raise the funds.

Heretofore we have been thinking about the building funds of the hospital. There is not so very much to be said about the fund for its permanent support, excepting this: that the finances of the hospital should be definitely provided for on some reasonably safe basis, so that there would not likely be a regular annual deficit. For instance, if it is to be a 50-bed hospital divided into a small number of private rooms, a few small private wards, and the balance of the beds in larger wards, then every bed in the hospital should have a price set for its occupancy. Then it would be safe to subtract 25 percent from the different classes of beds or rooms or wards for non-occupancy and add up the 75 percent, the total of which would be the maximum on which the hospital could count as its gross income from patients' beds. If it is intended to practice the method of charging for the various services in the hospital, such as special diets, special medicines, laboratory fees, x-ray plates, etc., these will sometimes be sources of income over expenditure, but as a rule such charges cannot be set down as likely to provide any profit for the hospital's operations, at least for some years to come, and indeed the whole practice of these special charges is rapidly and justly becoming obsolete, on the ground that

when a patient goes to a hospital he and his physician have a right to expect that that hospital will furnish all of its facilities for the diagnosis and treatment of the disease from which the patient is suffering. Special charges for these facilities have given rise to an immense amount of trouble and dissatisfaction between patients and their hospitals; frequently special charges in such hospitals aggregate more than the room rent, and the sick person who is expected to pay, let us say, \$15 for his bed per week, and had arranged perhaps for that amount, when called on to pay another \$15 or more in the shape of special charges will be very greatly embarrassed, disappointed, and oftentimes angered, and the cure for which he came to the hospital might be seriously impeded and interfered with because of his mental worry.

It is pretty nearly impossible to say, before a hospital is in running order and before its organization and equipment are complete, what it is going to cost to run it, for several reasons. In the first place, very much depends on the character of the medical staff. If the men who are to bring their patients to the institution are not going to have the scientific facilities to which they have been accustomed and which they scientifically know about, they are going to be dissatisfied, and the hospital may lose many patients that are allowed to remain at home that would otherwise have been practically forced by their physicians to go to the institution. Not long ago Bellevue Hospital, of New York, reported that more than 50 percent of the cases that had come to autopsy in the institution were incorrectly diagnosed. It is impossible, of course, to say how many of those cases might not have come to autopsy if proper diagnosis had been made, but if Bellevue Hospital, with its magnificent group of medical men, failed in more than 50 percent of cases in which the illness was so serious as to cause death, is it likely that the patients in a small community would fare any better, and would not the facilities of a hospital in such a community be of immense service to the medical men, and would not many cases that might otherwise stay at home be sent to the hospital if the physicians knew that they could depend on the facilities for helping them to make a correct diagnosis and giving them proper treatment? But these scientific facilities in a hospital cost money, and the expense must enter into the per capita cost of the patients and bring that per capita up considerably. Then, the overhead expense in a hospital is the largest item, and it makes very little difference if in a 50-bed hospital there happen to be only 35 patients. The expense would be pretty nearly the same as though there were 50 or even overcrowded to 60 patients.

But these contingencies should be taken into account, and some attempt made to average up the probable cost of maintenance of that hospital. This can be done within a fair degree of accuracy, and then the money necessary to meet these expenses should be raised, or the proposed per capita cost, including the overhead expenses of running, should be cut to meet the probable income. For the first year or two there might be a failure to approximate the two accounts—income and expenditure—but after that it would be fairly easy to “temper the wind to the shorn lamb,” so to speak, by cutting the expenditures to meet the income, and then whatever charity work it is intended to do should be done outside of this business organization; in other words, if the hospital is running on an even keel and is barely self-supporting without taking any charity patients, that situation should continue until the income can be brought up or the expense brought down, or until separate funds are provided from some source to take care of any charity work that is wanted to be done.

There is really only one way to raise money for the permanent support of a hospital of the kind that we are just now thinking about, and that is by annual subscriptions from the people in the community who can afford to give for such a purpose; and the best way in the world for a board of trustees to encourage the subscription of funds for the support of the hospital is by presentation of accurate, conservative, and understandable figures to show what the hospital is costing. A paragraph of such a report can tell what the hospital is doing, but the costs must be in figures, and they must be accurate in order to encourage the enthusiasm of people who would be willing to give for hospital purposes if they just knew that their money was to be used properly.

Suppose the hospital were going to cost \$2,000 a month for maintenance. How easy it would be to take that figure and go with it into the community, and how easy the last few hundred dollars would be to get because almost anybody will give a little help to round out a hospital supporting fund.

Of course, the prime necessity in an enterprise of the sort that we are thinking about is a board of trustees in whose members the community has confidence. The next prime necessity is to conduct the institution so that that confidence can be maintained. We all of us know hospitals in this country situated in comparatively wealthy communities and that have the hardest kind of time to keep going; to their boards of trustees it is inconceivable that anything that they themselves may have done or left undone is responsible for this

situation, but, as a matter of fact, the failure of the community to support these hospitals is due to the character of the service that the sick get in them. This writer has seen many institutions that were running behind and in hard financial straits, and whose board of trustees was at its wits' end to account for the lack of interest on the part of the community in the institutions. This writer has seen these hospitals brighten up, pay their debts, and have money in the treasury by the simple process of a reorganization of the personnel in the management, by the introduction of a superintendent who knew what real hospital service

was and who gave it to the community. In some cases it took no longer than thirty days for the doctors in the community to know what had happened and for the hospital to fill up with patients. There is another prime necessity concerning the financial stability of a community hospital, and that is the careful keeping of the accounts, but this brings up another topic that will be discussed later on.

Next month we will take up the planning of the small community hospital, the internal arrangements and the reasons therefor, the materials to be used, and the question of costs.

PRINCIPLES OF DAYLIGHT AND ARTIFICIAL LIGHTING OF HOSPITALS¹

Source of Light Is First Consideration—Study of the Human Eye—Anatomical and Psychical Requirements—Special Demands in Hospitals—Lighting the Ward—The Operating Rooms—Service Departments—Running the Circuits

BY E. R. KNOWLES, E. E., C. E., OF CORNELIUS S. LODER AND ASSOCIATES, CONSULTING ENGINEERS, NEW YORK

INTRODUCTORY

LIGHT is the thing we recognize by the sense of sight, and the sensation of vision is the process of seeing things.

We see an object when light falls upon it and is reflected from the object to the eye, and the object upon which the light falls becomes illuminated; illumination is therefore an effect, or result, produced by light.

In order that any person may work to the best advantage and the highest efficiency his proper housing is a matter of the greatest importance, for upon his surroundings and facilities for work depends his effectiveness of operation.

In this connection the question of illumination plays the most important part.

No matter how well one is supplied as to room space, desk and furniture outfit, heating and ventilation, telephone and stenographic service, filing and card systems, all of which tend to the best of service, if the lighting arrangements are not properly devised and placed as to position, quantity and quality of light, he cannot do his work to the best advantage. This being the case, it becomes of the first importance that the lighting conditions shall be those which are best adapted to the special needs and requirements of the work to be done, and that they shall be as modern and efficient as possible and at the same time as economical in operation as requirements will permit.

Illumination must be acceptable to the eye, and we should be able to see objects clearly and distinctly and with a minimum of eye fatigue.

Efficiency and economy in artificial lighting does not necessarily mean the obtaining of a maximum of light from a minimum of electric current, gas or oil; but it does mean, first, the placing and giving of that quantity and quality of light which will enable the operator, by its use, to do the particular kind of work required in the most efficient manner; and, second, the obtaining of such lighting or illumination at such a minimum of expenditure of electric current, gas or oil as the illuminating requirements will permit—safety and efficiency first, and *then* economy.

To see easily and comfortably without strain and without danger to the eyesight and health there are certain conditions to be fulfilled:

1. There must be such a proper placement or positioning of the light source as will best suit the particular conditions which have to be met, and the light source, fixtures, shades, globes, reflectors and other apparatus must be selected with this end in view. The illumination of an enclosed place has two principal requirements to fulfil, general and special illumination; general as applied to the ordinary diffused lighting of a room; special as applied to the local lighting of desks, operating tables and other special articles and locations which require special treatment as to the location of the light source. It will be evident that the placement and positioning of the light sources are of the first importance and that in determining this no general rules can be followed, save one. Mankind has always received his day lighting from the sky or from above the line of vision; as a result that part of the retina of his eyes on which the light from above chiefly falls is accustomed to it, while the same or even less amount of

¹This is one in a series of articles on Engineering Problems in Hospitals.

light coming from below the line of vision falls on that part of the retina which is unused to it, with a consequent irritation and discomfort. The remedy is obvious; it is best, whenever possible, to have the source of light so placed that it will be as far above the line of vision as is permissible under the required conditions.

2. The quantity of light received from a light source on a given subject must be carefully considered. What is the light to be used for? General illumination? To read or write by? To bring into view the working parts of a machine? To examine a patient or perform a surgical operation? To match colors? To display goods or pictures? Or to make a pathway safe and plain? Is the color of the object dark or light, and is the object smooth or rough, polished or unpolished. All of these and kindred questions must be carefully considered in determining the amount and kind of light required from a given source.

2a. There must be sufficient illumination to enable objects to be distinctly seen. Saving light at the expense of eyesight is poor economy. Since all objects are seen by the light which they reflect, the amount of illumination will largely depend on the character of the objects themselves, dark objects requiring more light than light ones. It will also be evident that a well shaded source of light which may be of low intrinsic brilliancy when looked at directly, may be so shaded and directed on the object to be seen as to give ample illumination for the required purposes.

2b. There must not be too much illumination; unshaded or brilliant sources of light so placed as to be in the line of vision are fatiguing to the eye and greatly diminish the seeing ability of the user. Even when the light source is not directly in the line of vision, the eye instinctively travels to the bright spot, with a consequent detriment if the light source is brilliant or unshaded. Light sources are being continually improved and made more brilliant as well as more efficient, and their intrinsic brilliancy has reached such a point that in an unshaded condition they are exceedingly painful to the eye and injurious to the eyesight and more than ever before require to be enclosed and shaded to a sufficient degree to obviate this condition. Light, to be comfortable and perfectly safe for the eyes, must not be too intrinsically bright and must come in a diffused or softened form and not directly from the light source itself. It may be stated as a fact that all light sources are too bright to be used uncovered, and where the light is to be used for careful vision they should be enclosed or shaded in such a way as to diffuse their light, and so placed that the eye cannot see the source of light.

3. All fluctuating or flickering light should be avoided. If you go from a dark room into bright sunshine the sensation is unpleasant, and if continued is detrimental to the eye. If you use a light that fluctuates you get the same unpleasant sensations and conditions; the eye gets strained and fatigued in its endeavor to adjust itself to these varying conditions, with a resultant inability to see properly and an uncomfortable and painful condition.

4. The quality of the light must be carefully considered. By this is meant the character of the light: whether white, reddish, yellowish or bluish white, according to the requirements of the work to be done. For instance, in surgical operations, the matching of color tints as in silk or paper mills, the sorting of letters in the postoffices, it is necessary that the light shall be as white as possible; while for general illumination, reading, writing and many other processes a warm, yellowish white is more grateful to the eyesight and can be used to better advantage than the pure white light; and for photographic and kindred purposes the blue white light of the mercury vapor or arc light is preferable on account of its high actinic value.

Lighting may be divided, according to the light source used, into two general classes: natural or day lighting, and artificial lighting. Both of these should be carefully considered and worked out when the question of the proper lighting of a building is under consideration. Daylight is the form of lighting into which we were born and in which we live and to which we are all naturally accustomed. Artificial light is that form of lighting which has been created by man for use during the absence of daylight. Naturally the tendency is to consider daylight as the best for all purposes, so much so that the phrase "make the artificial lighting imitate daylight as nearly as possible" is one commonly heard and one commonly accepted as correct. But is this so and is the assumption the correct one for indoor illumination?

Daylight is very variable in its intensity, is generally too brilliant and sometimes too dull; so that indoor lighting by daylight as commonly practiced is generally imperfect and unsatisfactory. Quite frequently one side of a daylighted room is too brilliantly lighted while the other side has hardly enough light to see by, and one must twist and turn in order to secure a position where the glare of the outer daylight does not fall upon the eyes, and where the object to be observed is properly illuminated. Very little attention, however, is given to means for obviating many of the difficulties attendant upon daylight illumination, although by careful window design and the use of

certain forms of glass in the windows much better and more satisfactory results could easily be obtained.

On the other hand, artificial lighting can be made of any intensity desired, can be maintained at an unvarying intensity of illumination, and can be as evenly and uniformly distributed and diffused as may be desired.

Since we cannot have daylight all the time and must resort to artificial light when daylight is absent, we have instinctively arranged the artificial lighting so that it is as perfect as possible and fills every requirement of good lighting, both as to placement, quality and quantity of the light used; and any attempt to change these conditions and to approximate to daylight conditions would be at once opposed, because the artificial lighting is much more pleasing and restful and really fills all the conditions of good lighting better than could possibly be done by the best and most carefully arranged system of daylighting.

We tolerate daylight conditions as they usually are because in a large measure they cannot be changed; the position of the source of daylight we cannot control; it is movable and is constantly changing its place and varying its intensity. But the source of artificial light we can control both as to position and intensity.

It would seem, therefore, that the arrangement and distribution of artificial illumination is the standard to go by, and that every effort should be made to devise means whereby daylighting could be made at least to approximate artificial lighting, and that very careful consideration should be given to the size, position and arrangement of all windows or openings in the walls of buildings through which daylight must pass and illuminate the rooms within, and to the character and placement of the glass used to close these openings.

In all problems of illumination we must deal primarily with the light source. By a light source is meant a substance which is raised to such a temperature that it sets up vibrations of such character in the surrounding medium that they, falling upon the eye, produce the sensation which we know as light.

From the earliest days some form or source of light has been known and in use. The pine knot torch, the tallow dip, the oil lamp, illuminating gas and the electric lamp were used in turn, and each was superseded as the source of light was improved; but all depend for their illuminating properties on the vibratory principle just enunciated.

The quality and quantity of light given off by such bodies depends very largely upon the type of

source; for instance, the carbon filament electric lamp gives off a light which has an abnormal number of red rays in its makeup; the mercury vapor electric lamp gives off a light which has an abnormal number of blue rays; and the most recent, the tungsten filament electric lamp, gives off a white light, which has most nearly the proportions of daylight. This source of light, the tungsten, is the ideal source for nearly all of the present-day lighting and is rapidly displacing the other sources of light, with the possible exception of the Welsbach incandescent gas mantle, which is also a most satisfactory and efficient light source and one widely in use.

The amount of light necessary for good illumination depends upon the purpose for which the place to be lighted is to be used. Thus the requirements for street, house, office, hospital or public building lighting present wide differences, and furthermore depend upon the interior arrangements of the buildings, the dimensions of the rooms, the character and color of the walls, ceilings and furnishings and the individual ideas of the parties interested in the building and its operation; and no absolute rule covering all conditions can be laid down.

The proper method of lighting a room depends upon the style of room, the purpose of lighting and the effect desired, and may be considered under two divisions, general and special lighting: general as to the average requirements of the room, and special as to the requirements of certain portions of the room or certain objects in the room.

There are three types of general illumination in vogue, known as the direct, semi-direct and indirect, the characteristics of each being in a measure indicated by their titles.

In the direct system the source of light is either bare or enclosed in a frosted or opal covering, and is either placed in position in this open condition or is placed beneath a properly arranged glass or metal reflector by means of which the light is reflected direct towards the object to be illuminated; the major portion of the light being so directed, but a small portion passing through the glass reflector to the ceiling and walls of the room, from which it is reflected and diffused through the room.

In the semi-direct system the source of light is placed above or in a glass bowl or reflector, and the major portion of the light is reflected to the ceiling and walls of the room, and from them reflected and diffused generally throughout the room, a small portion passing through the bowl or reflector downward into the room and so adding to the total illumination.

In the indirect system the source of light is placed above or in an opaque reflector or bowl and all of the light is reflected directly to the ceiling and thence again reflected and diffused throughout the room.

In the direct system the floor and lower portion of the room are most brilliantly lighted; in the semi-indirect system the whole room, floor, walls and ceiling, are more or less uniformly lighted; and in the indirect system the ceiling and upper part of the room are most brilliantly lighted.

The trend is toward the ultimate type of system, which is the concealed system of lighting; in which the room is more or less uniformly lighted by reflected and diffused light from concealed sources. The indirect system is the nearest present approximation to this system.

As before stated, the desirable factors in general illumination are: sufficient illumination everywhere for the purpose to be accomplished; no painful or high intrinsic brilliancies visible; no great contrasts in brightness; and soft, pleasing shadows.

As a general proposition the direct system does not satisfactorily meet these conditions, and the choice is largely between the semi-indirect and the indirect, with a preponderance of opinion in favor of the semi-indirect, due in a large measure to certain psychological factors involved. While the indirect system gives a very satisfactory illumination and one which is very restful to the eye, there is a mental equation in most people which cannot be wholly eliminated. For many years prior to the present methods of illumination, people have been accustomed, as soon as darkness came on and daylight disappeared, to light their candle or lamp, which, while it gave the illumination desired, was at the same time visible to the eye and added by its visibility to the apparent cheerfulness of the room and surroundings; and as this has been the practice for so long a time the connection between the appearance or visibility of the light source and the apparent cheerfulness of the surroundings has become unconsciously a part of human nature and the conception has been inherited by one generation from the preceding one. When the average individual, therefore, is an occupant of a room which is entirely illuminated by indirect lighting, a "sense" of darkness and gloom is felt; not that there is this darkness, but the fact that the eye has been trained from time immemorial to see the source of light causes this feeling of discomfort and darkness. It will take a long period of education to eradicate this mental condition, and until this is accomplished the ultimate concealed system of lighting will make little headway.

The semi-indirect system of lighting fulfils all

of the illuminating as well as psychological requirements. A room illuminated by this system is bright and cheerful because the source of light, even if of low intrinsic value, can be seen.

Not alone has the character of the light sources been improved and rendered highly efficient, but corresponding advances have been made in the character and forms of reflectors, globes and shades, which are made in endless variety and forms of exact reflecting or diffusing surfaces, so that it is possible to select a form of shade, globe or reflector which will meet any given requirement.

The character and design of fixture for general and special purposes have also been made applicable to practically every lighting condition, and the combination of the placement, quantity and quality of light has been reduced to so scientific a basis that it is possible for an expert engineer to design accurately the proper illumination required for any given condition at a maximum of efficiency and economy. Each case must, however, be carefully studied by itself and by an expert in this branch of engineering if the desired results are to be attained in the most satisfactory manner.

HOSPITAL LIGHTING

While the lighting of the major portion of all buildings is very much the same in all cases, each building has in addition certain portions calling for special treatment, so that the lighting of a building may be divided into two classes, general and special.

Hospital lighting is a very decided example of these conditions. It is almost in a class by itself, combining as it does the requirements of general lighting with more special requirements than does almost any other institution which might be mentioned; and yet, for some unexplainable reason, the question of the proper daylighting and artificial illumination of hospital buildings, has not, until quite recently, received the same careful thought and attention that has made most modern institutions models of elegance and hygienic forethought.

Although ordinary methods of illumination and ordinary illuminating devices fail to give the proper quality and distribution of light which is specially required in many portions of hospitals, many hospitals continue to be constructed without due regard to the principles governing their special lighting requirements and without the service of the experienced illuminating engineering expert, resulting in many cases in faulty and unsatisfactory illumination.

Hospital lighting may be divided into three general classes: ward lighting, operating room lighting, and general lighting in such rooms as offices,

corridors, toilets, kitchen, dining and service rooms, etc.; and many of the latter may also be considered as having general and special conditions. While good lighting is essential in every part of a hospital, the greatest importance attaches to ward and operating room lighting, and there are many special problems connected therewith.

The source of light will in a measure depend on the location of the hospital building, and on whether the building has its own generating plant or is dependent on an outside source. It may be gas, using an incandescent mantle such as the Welsbach; it may be electricity, using an incandescent electric lamp, such as the tungsten; or it may be a combination of both, there being cases where only gas is available, although the almost universally used source is electricity and the electric light.

WARD LIGHTING

The first requisite in hospital construction, equipment and management, is that everything should be arranged so as to bring about tranquility of mind in the patient in order to add to his chances of recovery; and to this end the chief consideration for the general illumination of a hospital ward is a soft, restful, evenly diffused light, free from glare or any unusual arrangement of great contrasts, such as a bright ceiling and a dark room, or a source of light brighter than the walls or ceiling.

A patient lying on his back in a hospital is usually at a low ebb of vitality and nothing will cause him more annoyance or nervous strain than to be compelled to gaze at a brilliant light source, or to feel that, while there is illumination, there is something missing which his subconscious mentality tells him should be there.

Daylighting of the wards, as well as all parts of the building, should be most carefully considered and every effort should be made to so arrange the position, size and glazing of the windows that a soft, evenly diffused light is obtained in all parts of the rooms, especially in the wards. Very much can be accomplished in this direction by the use of prism glass, properly arranged in the upper portions of the windows, by means of which the light from the sky can be so directed that it will pass across the upper portion of the room and increase the lighting of the side of the room opposite the windows, thus making the lighting more uniform.

Many schemes have been advocated for the correct artificial lighting of hospital wards. For general lighting the most usually approved method is by means of the semi-indirect system of lighting, using suspended translucent bowls of such density that the maximum brilliancy of the bowl is never

greater than the ceiling illumination obtained by the light reflected from the bowl to the ceiling. These are each equipped with two and sometimes three incandescent lamps of such candle power that varying intensities of illumination may be obtained, each lamp being independently controlled by a suitably arranged switch. If equipped for two intensities, one should be of very low intensity, just sufficient to enable the nurse at night to wait on the patient; the other should be of sufficient intensity for reading, etc. If a third intensity is added, it should be of such high power as will enable the doctor or surgeon to make an examination; but this is not satisfactory and is seldom done, a different and special arrangement of lighting being provided for examination purposes, namely, either the "bedside" or portable light, or specially arranged wall brackets.

"Bedside" lights are not desirable, and are only used where absolutely necessary. Preference is given to a specially arranged bracket light, mounted on the wall above the bed head, and so arranged that it can be pointed in any direction. This light is furnished with a special form of glass reflector with opaque sides. The reflector is reversible, one side being of concentrating type, designed especially for bedside examination, and obviating the use of a portable lamp by the attending physician. When reversed, the reflector directs the light to the ceiling and so acts as an indirect source of illumination. The opaque sides so close the light in that no portion of it can reach the eye of any other patient in the ward, the bed under consideration being the only one illuminated.

In addition to the careful arrangement of the sources of light, their various positions and intensities, and the finish of the ceiling and walls of the ward, should be very carefully considered, as upon these factors largely depends the success of the lighting arrangements and the ultimate restful and soothing effect of the ward. The most pleasing and satisfactory results are obtained by treating the ceiling with a flat white surface and the walls in a slightly darker tone, such as buff or French gray. The fixtures should also be specially designed along plain, smooth lines and finished in white or a light color to match the walls and ceilings of the room, all violent contrasts being avoided and everything likely to attract the patient's eye being carefully eliminated.

OPERATING ROOM LIGHTING

The problem of the successful lighting of the operating room is one of the most difficult in illumination and one to which a large amount of careful consideration has been given. Unlike

ward lighting no necessity exists for an even illumination of low intensity. No restful or soothing conditions are required in the operating room; the patient is unconscious, and the surgeons and attendants are very much awake and on the point of extreme activity and attention, with the result that in color the lighting must approximate daylight as closely as possible, must be ample, intense and directed in such a way that the operator can see with the utmost accuracy and clearness the parts on which he is operating.

The equipment should be designed along plain, smooth lines, so that it will not catch dust and can easily and readily be cleaned. As the operating room is generally finished in white, and all attendants are clothed in white, the general illumination of the room outside of the operating table can be very readily taken care of. The main point to be considered is its proper placement in order to prevent any possibility of the source of light shining in the eyes of the operators and so producing glare and inefficient visualization.

Very many methods of lighting the operating table have been devised and more or less successfully used, a good deal in this connection being dependent upon the temperament and individual requirements of the operator, the lighting conditions which are eminently satisfactory to one surgeon being useless to another; and as he is the central and important figure and upon whom depends the outcome, it is of the utmost importance that the lighting conditions shall be such as best suit his desires. This being the case, it is impossible to lay down any fixed rules governing this special lighting; each operating room and the requirements of the operating surgeons must be studied separately and a system of lighting arrived at which best fills their requirements. There are a number of special forms of lighting fixtures for the operating rooms, all of which give very satisfactory results.

One other point in connection with the lighting of the operating room which must not be lost sight of is the need of absolute certainty of the continuity of the lighting during the operation. The extinction of the light for even an instant of time, occurring at a critical point in the operation, might work irremedial disaster. To prevent such a possibility, the lighting system of the operating room should be arranged in duplicate and from different sources if possible, so that a constant source of illumination is assured.

Gas, either illuminating or blau, with Welsbach mantles, may be used for this purpose, the operating room being piped for such reserve lights; and with properly arranged fixtures and pilot light control, these gas lights can be kept ready for in-

stant use if required. There should also be provided a number of plug outlets, located at various points in the operating room, to enable the ready use of a portable, hand or other special lighting device if required.

GENERAL LIGHTING OF THE HOSPITAL

Aside from the wards and the operating room the lighting of the other sections of a hospital building are, with a few exceptions, quite general in character and following along the lines of the best practice for hotel, office and other large buildings. Halls and corridors, living and dining rooms, dormitories, utility rooms, kitchens, laundries, toilet and bath rooms, and other general rooms are in a class with similar portions of hotels, care being taken to make the lighting of the doctors' and nurses' quarters as cheerful and comfortable as possible. Offices, reception and consultation rooms are in a class with similar rooms in office and other large buildings and should receive the same careful attention. Dispensaries, laboratories and other similar rooms are in a class with the modern drug store and college laboratories, special attention being given to the proper lighting of the prescription counter and lighting for microscopic and other technical work.

If there is a maternity or childbirth room forming part of the hospital, its lighting arrangements should follow along the lines of the ward lighting, especial attention being given to the bedside lighting, which should be easily controlled as to position and direction and of ample intensity of illumination for the purposes intended.

All closets for clothes, medicines, linen and other materials and appliances should have a light in each, so arranged that it will be automatically lighted and extinguished when the door is opened and closed. The entrance steps and entrances to the building should be well lighted and especially should there be ample light at the street, sidewalk or curb, so arranged as to indicate that the building is a hospital; and if there are grounds surrounding the hospital buildings, they should be well lighted.

CURRENT DISTRIBUTION

The current distribution system and its controls should be as simple and reliable as possible, every part being of the best that experience and practice dictates. All wiring should be in metal conduits, all switches and other controls should be enclosed in metal boxes; and, in fact, the whole distribution and control system should be, as far as possible, in metal from the source of current supply to each light or other operating appliance. The distribution system should be subdivided so that each floor and subdivision of a floor can be

separately controlled, such control points being so located and indicated that they are easy of access and can readily and quickly be found. All corridor, stairway, toilet and other public lights should be independently circuited and arranged and separately controlled from the other circuits of the building, preferably at some point on the main floor near or in the main corridor or superintendent's office.

A complete and independently controlled system of fire-escape lights, of a distinctive and easily recognized character should also be installed, as also a fire signaling and alarm apparatus, which shall be capable of indicating the location in the building where the fire is, and of notifying the tenants of the building at that point of the existence of the fire.

All signals from the ward rooms to the nurses, and, in fact, all signals from one section to another, should be of the silent type, indicating by lights or drops, or both, the point to which attention is required, no bells or buzzers being used; and all switches in the ward and other sick rooms should be of the silent type, making no snap or click when operated, quiet and silence being of the utmost importance in these places.

An ample number of insertion plug outlets should be arranged in all main rooms and corridors for the insertion of special lights and special heating appliances, the circuits in which they are arranged being independent of the lighting circuits of the rooms.

As this article deals only with the illumination of hospitals, the questions of heat and power are not considered except that it may be said generally that the electric current may also be used for all manner of power applications, and with great economy and ease of operation; also the electric current can very conveniently be used for many heating purposes, such as operating the kitchenettes for cooking and warming food, toasters, hot water heaters and many other special purposes where ease and quickness of service are of more importance than the actual cost of the service.

The question of the source of electric current, whether from an isolated generating plant operated by the hospital, or from some local central station, is one which should receive careful consideration. Generally speaking, the greater number of kinds of operations to be provided for the more certain it is that the isolated plant is the preferable source of electric current.

In a hospital there are very many requirements; light, heat, power, refrigeration, ventilation, vacuum cleaning, hot water, steam, hot air, compressed air, sterilizing apparatus, etc., all of which can usually be better and more econom-

ically operated by the isolated plant than in any other way; so the question of an isolated plant should in each case be very carefully considered.

The foregoing article is intended to give, in as brief and concise a form as possible, a general statement of the problem of hospital lighting, a somewhat intricate and difficult problem, and one which requires very careful consideration of all of its details by those expert in illuminating matters, bearing in mind at all times safety first; then efficiency; and then economy.

FAKERS IN TUBERCULOSIS HOSPITAL

One of Them in Startling Affidavit Confesses Widespread Swindling to Gain Admission

That a large majority of the 3,000 patients in the tuberculosis hospitals in New York city are fakers and frauds, and are not suffering from tuberculosis, is the assertion of one William A. Smith, recently a tuberculosis patient in St. Vincent's Hospital, West New Brighton, Staten Island. In a remarkable affidavit this man Smith has recently confessed that he has been a patient in four tuberculosis hospitals in New York during a period of eighteen months, and that he knew he did not have tuberculosis or any other disease making it necessary for him to accept hospital treatment. During those eighteen months Smith claims to have gone about New York city unmolested and without any interference from the institutions at which he was supposed to have been under treatment.

Smith's statement has been partially corroborated by Dr. Robert McCully, house physician of St. Joseph's Hospital, One Hundred and Forty-third street and Brook avenue, New York, where Smith first became a patient, and by Dr. G. Totten McMasters, of New Haven, formerly of the Presbyterian Hospital, New York.

Smith declares that any person with a letter from a "ward healer" can obtain admission to any of the tuberculosis hospitals of New York. He says he entered Bellevue Hospital by that method, and in his affidavit also tells a weird story about a traffic among malingerers and tuberculosis patients in the New York hospitals. He says that this class of fakers understand perfectly well that the so-called sputum test is the only examination given for admission to these hospitals; that when one of these fakers wants to enter a tuberculosis hospital for a few weeks' or months' sojourn, he buys a bottle of tuberculosis sputum from one of the patients who actually has the disease and submits it as a sample of his own secretion.

Dr. McCully, in commenting on Smith's confession, admits that the sputum test is not efficient or satisfactory, and that fakers could easily do what Smith says he has been doing. In all likelihood there will be a very radical shake-up in the methods of admission to the New York tuberculosis hospitals, and it is probable that other communities will find that they too have been victimized in the same way.

The elements which ought to determine the position of a hospital are the following: first, and before all others, purity of the atmosphere; second, the possibility of conveying the sick and maimed to it; third, accessibility for medical officers and for the friends of the sick; fourth, convenient position for a medical school if there be one.—Florence Nightingale.

UNITED STATES NAVY TUBERCULOSIS SANATORIUM, FORT LYON, COLO.

Abandoned Army Post Near Las Animas Lends Itself Well to New Purpose—An Ideal Climate, Beautiful Location, and Sanitary Surroundings—Arrangement of the Buildings

By OUR SPECIAL CORRESPONDENT, WASHINGTON, D. C.

THE president, by executive order, October 25, 1906, set apart certain sections of the Fort Lyon (Colorado) abandoned military reservation, containing 575.19 acres, with the buildings thereon, for use of the navy department for the purpose of a sanatorium. With this provision made, the work of putting it in readiness for the reception of patients was immediately instituted and has been carried on with very gratifying progress.

Fort Lyon is excellently adapted for the purpose of a sanatorium. It has an altitude of 3,800 feet above the sea level, and is situated on the north bank of the Arkansas river, five miles from the town of West Las Animas, on the Atchison, Topeka and Santa Fe Railroad, which passes within one mile of the reservation. The nearest spur of the

that in past years the Indians for hundreds of miles around always wintered in the valley. The average rainfall is eleven inches, which constitutes a very dry climate; snow falls infrequently, is seldom more than three inches in depth, and disappears quickly.

The fact that the authorities of Colorado made efforts to have Congress cede the location to them as a site for a sanatorium for indigent consumptives of the state would indicate its suitability for such an institution.

The location is a sandstone bluff, 2,000 feet wide and 1,500 feet long, 36 feet above the river, and slopes in all directions, giving excellent drainage.

The conditions at Fort Lyon for a sanatorium are as admirably combined as anywhere else in the United States. The climatic conditions are such that the patients can live out of doors the maximum amount of time, day and night, during the entire year, which, after all and above all, is the great consideration.

The old buildings, left by the army, that did not interfere with the general scheme of the sanatorium, were renovated and restored, and the others have been razed. Many new buildings have been constructed. In addition to these permanent structures, there is an extensive camp of tents, all durably set up in orderly arrangement on skeleton frames. The tents are arranged and furnished to accommodate two patients each, are roomy and airy, have side curtains which can be rolled up, and are screened in for protection from flies and mosquitoes.

The old parade ground has been left unobstructed as a center, and around it are grouped the various buildings. The immediate north side is occupied by the old officers' quarters, which have been placed in excellent repair for the accommodation of medical officers on duty. To the rear of these is a row of five cottages for the pharmacist and married hospital stewards. They are very commodious and pleasant quarters, all having broad verandas. The old military hospital, toward



Fig. 1. United States Navy Tuberculosis Sanatorium. General view, parade grounds, officers' quarters, water tower, etc.

Rocky Mountains is about one hundred miles distant.

The climate is mild and dry, with a maximum supply of sunshine and a minimum number of even partly cloudy days, comparing favorably with both Fort Stanton and Fort Bayard, New Mexico. The summers are a little cooler, the winters a little colder, the amount of rainfall, as shown by observation, a little less, and the amount of sunshine equal to that enjoyed by the above-named places, being in the neighborhood of 80 to 85 percent annually. In the summer the mornings and nights are bracing, and even at midday the heat is never exhausting. The winter climate is so satisfactory



Fig. 2. United States Navy Tuberculosis Sanatorium. Panoramas of quarters and Arkansas river in background.

the east corner of this section, has been modernized for the care of the serious cases. The building has been arranged so as to give as much open-air treatment as possible. The veranda is provided with glass shutters, so that when there is occasion it can be completely inclosed and patients can spend their days and nights there even during inclement weather. The addition of a kitchen, pantry, dining room, toilet room, and lavatory, and the equipment of a dispensary and of an up-to-date operating room for the care of emergency cases or for the surgical treatment of tubercular pa-

made by the construction of four lean-to frame wards, each with a capacity of 16 patients. These wards are of the type for open-air treatment of tuberculosis, built practically on the plans used by the Agnes Memorial Sanatorium in Denver, Colo., and all have a southern exposure. Each building has a central two-story section, with reading room, office, and lavatory on the first floor, and living quarters for four hospital attendants on the second floor. On each side are the lean-to wings for patients, eight in each, with half-roofed 12-foot verandas on the south. Full-length sliding doors, one for each individual, connect the main sleeping rooms with the veranda and permit the



Fig. 3. United States Navy Tuberculosis Sanatorium. Officer patients' infirmary and quarters.



Fig. 4. United States Navy Tuberculosis Sanatorium. Infirmary, marine barracks, and tents. Power house in rear.

tients, makes it a complete establishment in itself, with a capacity of about 30 beds.

On the south side of the open quadrangle, facing the officers' quarters, is the administration building, remodeled from the old headquarters. It is a large and commodious one-story structure, and contains offices for commanding, executive, and pay officers, a well-appointed library, an assembly hall, physical examination rooms, x-ray room, dark room, and an extensive, splendidly equipped laboratory for all kinds of research, particularly the study of tuberculosis.

Special provision for the ordinary tubercular sick, not requiring hospital treatment, has been

ready transfer of beds to and from the rooms, as the weather conditions or hours of the day may indicate.

A special subsistence building is located just to the east of the lean-to wards. It is a spacious building, with a main dining room for patients, seating about 140, a dining room for attendants, one for hospital apprentices, a store room, pantry, and kitchen. All the arrangements are complete. The kitchen has modern equipment throughout. The bakery, a separate building, is in the rear, has been planned on a liberal scale, and is modernly equipped, the question of future expansion of the sick accommodations being duly considered.

The power house contains, in addition to the boilers, dynamos, ice machine, and large cold storage rooms. The plant furnishes heat, hot water, steam for sterilizers, motive power for machinery, electricity for lighting and other purposes, and ice for the sanatorium. A laundry building is close to the power house, and is equipped with the latest improved machinery. The morgue is complete in every respect to meet present-day requirements.

The garbage crematory is of large dimensions for the rapid and efficient disposal of refuse. The recreation building contains billiard tables, bowl-

ing alleys and arrangements for many other games, small theater, and a library.

The post exchange furnishes patients of that remote station with all the necessities and even luxuries which can properly be permitted them as an additional comfort.

The commanding officer, Medical Inspector George H. Barber, United States Navy, has as his assistants Surgeon R. Roller Richardson and P. A. Surgeons Ansey H. Robnett, Charles J. Holeman, and Penlie B. Ledbetter, all of the United States Navy.

SHOULD THE HOSPITAL BUY POWER OR INSTALL A PLANT?

A Number of Conditions Operate to Decide the Question—Price Is Usually the Great Factor, but Size of Institution and Multiplicity of Requirements Are Important

By FRANK SUTTON, CONSULTING ENGINEER, NEW YORK

ONE of the most important subjects, and one which generally confronts the builders of a hospital or similar institution, is whether to install electric generators for producing current for electric light and power, or to buy current from some public service corporation. There is always a long discussion and numerous conferences between the owners, architects, consulting engineers, and public service representatives, and in a number of instances it sifts itself down as to who is the most convincing talker, the consulting engineer or the public service representative. Such a condition of affairs is manifestly all wrong, and it seems to the writer from the experience which he has had that there ought to be some means devised for arriving at a proper conclusion in such an instance, and especially on such an important subject.

The principal points to be considered in such an instance would be the size of the institution, which would naturally govern the amount of moving machinery to be installed and the cost or approximate cost of generating the electricity, which would be compared with the price at which current could be purchased.

In a small institution, where the amount of moving machinery—that is, steam-operated machinery—is limited, it is generally the practice to purchase current from a public service corporation, which current is generally purchased on a sliding scale at a price per kilowatt hour, starting at about 10 cents per kilowatt hour and reducing to about 5 cents, depending on the amount of current consumed. These rates vary in different states, and in most instances the rates are established by legislation.

When the buildings comprising the institution

commence to assume larger proportions, the board of managers generally decides to install mechanically operated laundries, refrigerating plants, and, in most instances, quite a number of auxiliary steam or electrically driven pieces of apparatus for different uses around the institution. It is at this point where the question always arises as to whether they should install their own electric generating plant or buy the current from some outside source, and it is at this point that the discussion starts.

The average electric generating plant can produce current, including fixed charges and depreciation on the plant, for from 3½ to 5 cents per kilowatt hour, and, if the plant is well designed and properly operated, current can be produced at a lower figure, probably in the neighborhood of from 2½ to 3 cents per kilowatt hour. Of course, in some localities where public service current is produced by hydroelectric plants, or where coal is very cheap, current can be sold from 1½ to 2 cents per kilowatt hour, and when it gets to this point it is a question, in the writer's opinion, as to whether it is advisable to go to the expense of installing generators.

There are a number of advantages in an institution having its own complete plant, and there are still advantages in having an outside company furnish current, and there are good arguments always put forth for either one side or the other.

If a public service corporation quotes a rate of from 3 to 5 cents, depending on the amount of current consumed, the institution should carefully consider installing their own generators. The advantages obtained from them are as follows:

The exhaust steam from the engine plant can always be utilized not only in the winter months,

but also in the summer months. The principal uses for exhaust steam, which generally exhausts at a pressure of from 3 to 5 pounds above atmosphere, can be utilized in the winter for heating the building and in the summer months for heating hot water for domestic purposes, and also for operating ice-making machines, if the absorption type of refrigerating apparatus is installed, which runs principally on low-pressure steam. When the plant assumes these proportions, the extra expense for operating engineers' services is nothing, as the same engineers who operate the other moving machinery can also operate the electric generators.

The institution has the further advantage, if the plant is installed in duplicate, of being practically assured of electric service at all times, as transmission lines have been known in a number of instances to break down, thereby temporarily cutting out the current. Of course, the same argument is brought up, on the other hand, by the public service representatives, who will invariably put forth the argument that the private generating plant is apt to break down, but from the experience of the writer, and the way in which modern machinery is constructed, the chances of break-downs at the present time are very remote. There is, however, another phase of the question which should be considered in the installation of electric generators, and that is the first cost, as we all know that, with the exception of a very few institutions of a private character, it is a question of dollars and cents in building a hospital, and any extra equipment will have to be paid for, and therefore the owners should generally consider whether they can afford to spend anywhere from \$5,000 to \$10,000 extra for the cost of a plant when this same money could be utilized for more beneficial purposes in other parts of the building. This, in the writer's opinion, under conditions named, is the principal objection to the installation of an electric generating plant, provided the institution is situated where current can be produced for from 2½ to 3 cents a kilowatt. Of course, there are instances where the cost of fuel is very high, as well as labor, and where the actual cost of generating current would probably be from 4 to 6 cents. In an instance of this kind it is generally found that the public service corporation can furnish current at a very reasonable price, and it would therefore be the part of wisdom to seriously consider buying the current instead of putting in the plant.

Some of the disadvantages of installing a private plant are, as has been stated above, the first cost; then, again, the extra moving machinery to be looked after, which requires a certain

amount of care and attention. These two are really the only disadvantages that the writer can figure in the installation of a private plant. Of course, these disadvantages, on the other hand, would naturally be the advantages of buying electric current.

In connection with this subject the writer can think of no points in the construction of an institution where more mistakes are made than on this very question. Without mentioning the name of the institution, the writer knows of an instance at the present time of a large hospital which has been completed about a year, housing from about 400 to 500 patients, where a complete equipment has been installed—that is, a high-pressure boiler plant, refrigerating apparatus, mechanical laundry, and all the other paraphernalia going with such an installation—and current is being bought at the flat rate of 5 cents per kilowatt hour. Up to the present time it has been demonstrated that, if a plant had not been installed, this institution could have saved anywhere from \$5,000 to \$8,000 per year.

There are many other similar instances that can be cited where the same mistake has been made, only in a greater degree. This is principally true in connection with municipal work, where the municipal authorities pay too little attention to engineering advice, although I have been informed by a number of people directly employed by municipalities that one of the principal reasons for omitting private plants and taking current from public service corporations is not due to the fact that they can buy current cheaper, but primarily is due to the fact that the average employee of a municipality does not take sufficient interest in moving machinery to get the proper work out of it, or take proper care of it, and therefore a number of municipalities reason that it is cheaper for them, due to maintenance, to buy public service current. This, of course, does not apply to such a degree in private institutions.

As stated in the first part of this article, it is an extremely difficult matter to arrive at the proper conclusion when a plant assumes the proportion of a good-sized installation, and arguments can be propounded for and against the installation of private plants, and generally are, when such a matter is considered. The writer, however, is frank to confess that, unless a public service corporation can furnish current for from 1½ to 2 cents per kilowatt hour, the private plant has much the better of the argument, and should without doubt be installed, provided, however, that the institution is not going to cripple itself financially by spending the extra money for the installation of the plant.

ARTIFICIALLY COLORED FOODS

Colors Are Used Either to Satisfy a Perverted Taste or to Conceal Inferiority—An Increase In the Kinds of Coloring Matter Used

By JOHN PHILLIPS STREET, CONNECTICUT EXPERIMENT STATION, NEW HAVEN, CONN.

THE use of artificial colors in foods and drinks has greatly increased during the last two decades, both in degree and in the variety of colors employed. Where formerly a few well-known coloring matters, chiefly vegetable, and a few mineral pigments, were used, a vast array, mainly coal-tar products, is now found.

Some years ago the use of such pigments as chromate of lead was quite common in confectionery, particularly in the cheaper sorts, but today this coloring matter is rarely, if ever, used. Other mineral pigments, obviously unfit for use in food because of their well-known poisonous effects, are those containing various salts of mercury, arsenic, and copper, but fortunately the use of these also is practically a thing of the past.

At the present time the great majority of the artificial colors used belong to the class of coal-tar products known as aniline dyes. These dyes number about two thousand, and scores of them have been and are used in our foods and drinks. In view of their prevalent use, it is indeed fortunate that many of them are quite harmless and are so powerful that only small amounts need to be used to secure the desired results. For instance, one ounce of auramine is sufficient to give a deep-yellow color to a ton of confectionery. On the other hand, certain coal-tar colors are decidedly objectionable from the standpoint of health alone, and under no circumstances should be used in foods. In this class are included those in connection with whose manufacture arsenic, mercury, or other metallic poisons have been used, and those which are inherently poisonous, like picric acid and Martius' yellow.

Unfortunately, the United States Government, chiefly in answer to the clamor of business interests, soon after the passage of the Federal food and drugs act in 1906, granted permission to use seven coal-tar dyes in foods, the so-called permitted colors. While the names of these dyes will not mean much to the average consumer, or even to the physician, and while unfortunately they are seldom found on the food label, nevertheless it is well that the consumer should familiarize himself with them. These permitted dyes are: amaranth, naphthol yellow S; ponceau 3R; light-green S. F. yellowish; erythrosin; indigo carmine; orange I.

When the food label bears the word "artificially colored," if a coal-tar has been used, it is usually one of these or a mixture of them. These

colors were selected by the Government because by most authorities they are considered harmless because they are not patented, because they may be obtained in pure condition, and because of "the unanimity of opinion among the manufacturers or their agents as to their fitness." The last-named reason is particularly illuminating, as it emphasizes how in past administrations the interests and claims of the manufacturer have been paramount to those of the consumer. The only protection to the consumer, and it is indeed but slight, lies in the fact that, in order to be used in foods, even these colors must be certified as to their purity and the presence of the artificial color must be declared on the label.

The next class of colors in most common use are those of vegetable origin, and in general may be considered harmless. The most important of these, judged by the extent of their use, are turmeric, annatto, caramel, saffron, cudbear, fustic, quercitron, logwood, and the various fruit juices. Annatto was formerly much used to color butter and milk, but has been supplanted largely by oil-soluble coal-tar dyes. Cudbear is used in jams, jellies, and fruit juices; caramel in flavoring extracts, soft drinks, mince meat, vinegar, and whisky; turmeric in mustard and other spices, prepared mustard, pickles, relishes, macaroni, spaghetti, noodles, salad dressing, and lemon extract. The use of turmeric is sometimes justified by its slight condimental value, but in general its use is simply for purposes of deception as to quality.

About the only animal color used is cochineal, better known under the name of "carmine." This is doubtless also a harmless color if one can free himself from the psychological effect of the knowledge that it is simply the extract of dried and ground insects.

As previously stated, few mineral pigments are used at the present time. Iron oxid is, however, occasionally found in cheap chocolate candies, and ultramarine is very commonly used in infinitesimal quantities in refined sugar to counteract its natural yellowish tint. Prussian blue, a very poisonous compound, is still used in the "facing" of tea and the "glazing" of coffees. Another mineral, sulphate of copper, although not in itself a pigment, has been widely used in the so-called "French" peas, imparting to them an unnaturally brilliant green color. The use of this mineral in

peas, beans, etc., is now interdicted by our Government, the interdiction applying as well to the imported as to the domestic product. Whole pecan nuts, too, are also frequently colored with an ochre, giving them a rich brown color and a fictitious appearance of superiority.

In vinegar we find still another coloring material, which hardly belongs to any of the classes already mentioned. Cider and malt vinegars are the most highly valued of all vinegars in this country, chiefly because of their body and flavor. Their natural color is a pale brown. At the present time distilled vinegar, or dilute acetic acid, is rapidly driving high-class vinegars from our markets, and its most efficient aid in this respect is artificial color. A quart of malt infusion in a barrel of distilled vinegar gives an excellent imitation of malt vinegar as regards color, just as a fraction of a percent of caramel converts distilled vinegar into "best cider" vinegar. A mixture of about 80 percent of distilled vinegar and 20 percent of so-called "molasses" vinegar is widely sold, sometimes as compound vinegar, but all too often as cider vinegar.

What are the reasons for this frequent use of colors in our foods? They are mainly two—first, the foolish demand on the part of the consumer for highly colored foods and drinks, and, second, the desire to conceal inferiority, or, what is the same thing, to make a food product appear better than it really is.

The manufacturer is not alone responsible for the painted foods of today. It is a truism that no manufacturer will long produce what he cannot sell, and the consumer is by no means blameless in this matter of colored foods. Too often it has been his demand that has led to the production of the "coppered" peas and the brilliantly colored jams and jellies, flavoring extracts, cordials, fruit juices, and alcoholic and nonalcoholic drinks. If one wishes to give a St. Patrick's Day luncheon, there may be some excuse for green-colored foods on the table, just as for a "pink tea" it may be desirable to serve only delicacies of a pink color. These exceptional occasions, however, too often are apt to become the rule, and our tables become laden with foods of rainbow hues in the attempt to appeal to perverted senses and jaded appetites.

The chief purpose, however, in the use of colors is to conceal inferiority. By a judicious use of color the most inferior product may be given a semblance of quality. This is especially true of jams, jellies, and ketchups. It is a common practice in making jams and jellies to substitute apple stock, or even apple wastes, for the higher-priced fruits. A careful use of color can easily convert apple waste into what appears like raspberry or

strawberry jam or jelly. In the same way color permits the catchup manufacturer to use his factory offal, consisting of skins, cores, and in some cases the table sweepings, in making up his product; cider wastes, properly colored, too, have been utilized in making these cheap ketchups. It is apparent, therefore, how the concealment of inferiority is the chief factor determining the use of color in many of our foods.

The food artist has even gone so far as actually to paint food in the strictest meaning of the term. The smoking of fish naturally causes a loss of moisture in the fish and a consequent shrinkage in weight. To avoid this loss, it has been found in some cases that the manufacturer has either only partially smoked his fish or omitted the smoking process altogether, and secured the requisite smoked tint by an application of paint of the proper color. Cases are also on record, and of quite recent date, where cheaper fish of similar texture have been actually painted to resemble salmon.

Now, what are the objections to the use of color in foods? From the standpoint of health, it cannot be said truthfully that the great majority of food colors are injurious. In isolated cases we find poisonous colors used, but these are quite exceptional. The chief objection to artificial colors in food is the commercial deceit which they encourage. Their use enables the manufacturer to sell inferior food materials under the guise of high-grade foods. Their use minimizes the importance of using good, wholesome raw material and of careful manipulation of this raw material. With the exception of confectionery and certain dessert preparations, in which artificial color may be used purely for esthetic purposes, the use of colors in food is mainly for the purpose of deception as to the food's origin or quality.

Furthermore, this use of colors creates false standards of quality. The intense and striking colors bestowed on the cheaper varieties of jellies, jams, ketchups, and other foods, which are so common in our markets, give these products only a faint resemblance to the genuine uncolored food, and in many cases tend to mislead the public into looking on the genuine product as inferior by contrast, and to create a demand and a craving for these unnaturally colored preparations. Repeatedly there have been sent into the writer's laboratory samples of lemon extract, suspected by the purchaser of being adulterated because they lacked the familiar intense yellow color. As a matter of fact, many of the purest lemon extracts are nearly colorless, but the consumer has been educated to believe that the yellow color is an essential quality of a pure extract. In the same way

many people mistrust uncolored butter. The excuse for the use of color in butter is that it permits of a visual distinction between it and oleo-margarine. Formerly this was true, but the oleo-margarine manufacturer has learned to combine oleo oils of varying colors so skillfully as to simulate perfectly the true butter color; so this excuse is no longer valid. The real purpose of coloring butter is that June butter has naturally a deep yellow color, and this butter for many reasons is the most highly esteemed. The butter manufacturer, therefore, obligingly adds sufficient artificial color to supply his customers with June butter twelve months of the year.

Finally, the use of color gives the dishonest manufacturer an unfair advantage over the manufacturer who sells only pure foods. The falsely trained public looks on these intense colors as a sign of quality, and the manufacturer, even though he may wish to be honest, is almost forced to employ the same practices as his dishonest competitors if he would sell his products. It is true that some of the most expensive food products on the market are artificially colored, and are so colored with no intent to hide inferiority, but to render them more attractive to the eye; even in such cases the practice is a deception and works injustice on the conscientious manufacturer.

What is the consumer's protection against these colored foods? The law requires that artificial color shall be declared on the label and that of the many coal-tar colors only the seven permitted dyes shall be used. This would seem to offer the consumer much protection, but in fact it does not. The consumer, and in some cases the trained chemist, cannot tell what particular color has been used. The consumer cannot tell, even if it be a permitted color, whether it is pure and free from poisonous contamination. The consumer has but one safe course to pursue—to read the label carefully, intelligently, and unremittingly, and, whenever evidence is found that artificial color has been used, to exclude that particular brand from his home. The consumer should remember that these dyes may be injurious to health, that they often conceal inferiority, and that they never add anything to the food value of the product.

Dynamic Effect of Food

A recent report from the Russell Sage Institute of Pathology in Bellevue Hospital shows that 750 calories of dextrose, or 260 calories of protein, increase the heat production of the body twelve percent during a period of three to six hours. In fact, it shows the stimulating effect of protein upon tissue activity to be three times as great as that of sugar. These observations confirm the experience long ago noted by thinking people that meat

is a heating food. Under the influence of the stimulating effects of meat the tissues expend in its digestion more energy than they receive from it.

HAY FEVER TREATED BY ORDINANCE

New Orleans Establishes Precedent in Legislating Against Weeds That Produce Disease

Due to the efforts of the American Hay Fever Prevention Association, a new ordinance has been enacted by the city of New Orleans which is expected to mitigate the sufferings of many afflicted people. Hay fever does not play an important part in the annual death rate, but statistics tend to prove in certain sections of the United States that fully 2 percent of the inhabitants are afflicted. The ordinance is brief, but to the point, and, if enforced in the efficient way that only New Orleans goes about such work, the result will be more than satisfactory. The following is a copy of the ordinance:

Section 1. Be it ordained by the Commission Council of the City of New Orleans that:

1. The tenant or occupant of any leased or occupied premises, lot, or other area shall not permit weeds or grass over two feet in height to grow or stand on the premises, lot, or area leased or occupied by him.

2. The owner of any premises, lot or other area not leased or occupied by another person shall not permit weeds or grass over two feet in height to grow or stand on such premises, lot, or other area owned by him.

3. The tenant or occupant of any leased or occupied premises, lot, or other area shall not permit weeds or grass over one foot in height to grow or stand on the sidewalk or banquette abutting the premises, lot, or other area leased or occupied by him.

4. The owner of any premises, lot, or other area not leased or occupied by another person shall not permit weeds or grass over one foot in height to grow or stand on the sidewalk or banquette abutting such premises, lot, or area owned by him.

5. A firm corporation having franchise rights or privileges on the streets shall not permit weeds or grass over one foot in height to grow or stand on any street or area, or any part thereof, which, by the terms of its franchise, it is bound to care for or to keep in good order, condition, or repair.

6. For the purpose of enforcing the provisions of this ordinance, a corporation shall be deemed to be represented by its president, or in his absence by its vice-president, or in the absence of both by the officer or individual in charge of the affairs of the corporation, and such representatives shall be held responsible and punishable for any violation by the corporation of the provisions of this ordinance.

7. Each of the members of a firm shall be held responsible and punishable for any violation by the firm of the provisions of this ordinance.

8. For every violation of any of the provisions of this ordinance, the person responsible shall, on conviction, be punished by a fine of not less than \$1, nor more than \$25, and, in default of payment of the fine, by imprisonment in the parish prison for not less than ten days nor more than thirty days, or both, in the discretion of the court having jurisdiction.

Section 2. Be it further ordained, etc., that all ordinances and parts of ordinances in conflict with the provisions of this ordinance be and the same are hereby repealed.

The trustees of St. Luke's Hospital, Chicago, have issued an appeal for subscriptions which will enable them to create a building fund of \$1,000,000. According to the plan announced, the money will be used to erect a fourteen-story building, with a capacity of 400 patients. The proposed new structure is designed mainly for the accommodation of persons of moderate means who will not accept charity, but cannot afford to pay the rates hospitals are usually compelled to ask of pay patients. A recent report shows that the ordinary income of St. Luke's Hospital for the fiscal year ending September 30, 1915, was \$322,353.72. The expenses of operation amounted to \$322,560.44. Thirty-nine percent of the patients cared for during this period were admitted free of charge. The institution has an endowment of \$425,000, with a separate income of \$10,000 a year, and it hopes soon to increase the endowment by \$1,000,000.



The MODERN HOSPITAL

Editorial Office . . . 6 North Michigan Ave., Chicago
Business Office . . . Metropolitan Building, St. Louis

EDITORS.

Henry M. Hurd Fidelity Building, Baltimore
Frederic A. Washburn . . Mass. General Hospital, Boston
Winford H. Smith . . . Johns Hopkins Hospital, Baltimore
S. S. Goldwater Mt. Sinai Hospital, New York
W. L. Babcock Grace Hospital, Detroit
John A. Hornsby . . . 6 North Michigan Ave., Chicago

SUBSCRIPTION.

Under domestic postage, \$3.00; foreign postage, \$3.50 (14 Shillings). Single copies 35 cents.

Domestic rates include United States, Cuba, Mexico, Porto Rico, Canal Zone, Hawaii and Philippines.

Contributors, subscribers, and readers will find important information on advertising page 34.

Industrial Welfare—A Special Number

The August number of THE MODERN HOSPITAL is to be devoted to the subject of Industrial Health. A vast amount of work has been done by THE MODERN HOSPITAL organization to ascertain what industrial corporations in this country have done, what they are now doing, and what is in their minds to do in the future in the way of health service for their employees.

The great industries have been classified according to the character of work that their employees perform. Literally, hundreds of papers have been generously provided, outlining what the corporations are doing. Welfare directors in these corporations have responded enthusiastically, and they have contributed all that time and their opportunities could afford to develop this great and growing topic so that the corporations can know, not only what others are doing, but what others are thinking about doing; and not only this, but what others have discarded either as unnecessary or undesirable.

The August number will be a very large edition—large in the number of copies printed and large in the size of the volume. Hundreds of corporations will be represented in its text pages, and there will be many illustrations picturing scenes in the welfare departments of corporations.

When THE MODERN HOSPITAL started out to cre-

ate this special industrial number there was a hope that it might be possible to present some standards to the corporations—some standards of cost, some standards of accomplishment, some standards as to just what in the shape of welfare work was desirable and just what was not desirable, either because of the state of mind of the American employee or because of the state of the various arts and industries. Unfortunately the hope that these standards and these measures of cost might be accomplished is not borne out by the developments of the past few weeks, during which the great mass of information has been in course of collection. We have had possibly a hundred welfare directors, auditors, and accountants, high officers in corporations, figuring conscientiously to determine just what their health service or welfare work was costing them and what it was producing on the other side of the ledger. So far only speculation has resulted, but that speculation is more than worth while. It at least has given us some foci to think from, some points of attack of the problem, and that is the first stage of the solution of any problem.

We hope that the readers of THE MODERN HOSPITAL, health agencies, and the industrial corporations, and the great labor body in this country, will agree that the August issue is a distinct and invaluable contribution to industrial service of the day.

This special industrial number is just the beginning. We intend to prosecute the subject vigorously. We are creating an organization for the special study of this vital problem, and each number hereafter will contain new developments in the story; and if THE MODERN HOSPITAL shall have established a leadership in the study of industrial welfare, if it never did anything else, and if it never does anything else in the future, its creation will have been more than worth while.

An Item in Education

Until very recently hospital administrators have been, of necessity, forced to depend on their own individual efforts and observations and study for their efficiency in their profession. There have been no schools in which hospital management was taught. Opportunities have been greatly limited which would permit those struggling to fit themselves for hospital management to see and know the best in hospital administration. Superintendents were too busy to permit the invasion of their institutions by those who merely came to learn, and too frequently hospital administrators have had neither the ambition nor the capacity to teach what they knew to others.

Things are not quite so bad now as they were, but there is still a dearth of opportunity for the training of hospital administrators. It is not the intention to go into a discussion of the subject of the general training of hospital administrators at this time, but one or two little incidents have occurred very recently to persuade the writer that hospital superintendents and assistant superintendents are overlooking one of their very best opportunities for improving their education and training—viz., the commercial side of hospital administration.

The advertising columns of THE MODERN HOSPITAL are being so carefully scrutinized and so rigidly protected from invasion by unworthy products or the manufacturers of mediocre materials that some of the best of our hospital administrators have expressed themselves as gratified at the opportunity that these columns afford them for broadening their knowledge of hospital commodities.

But not nearly enough study in this direction is being done. Every hospital administrator that pays the subscription price of THE MODERN HOSPITAL owes it to himself to obtain all the information from it that he can, and perhaps the department of THE MODERN HOSPITAL capable of the very highest order of assistance and helpfulness to the hospital people is its advertising columns. Hospital administrators should study these advertising pages just as they are in the habit of studying the text pages. They should weigh the claims of advertisers; they should compare the products advertised, and they should place themselves in touch with advertisers to secure the literature on which advertised products are predicated, and they should study this literature so that, when the time comes when they need to purchase materials or products, they can go about the business intelligently and to the satisfaction of those who are furnishing the money with which their hospitals are conducted.

This is not intended as a stimulus to subscribers to THE MODERN HOSPITAL to purchase supplies, but it is intended very seriously and very urgently to insist that the hospital people shall make better use of the current issues of their journal than most of them have been doing in the past.

Not only that—the commercial people themselves are entitled to something. The writer knows of one advertiser in THE MODERN HOSPITAL who, on almost an absolute gamble, expended a sum exceeding \$30,000 to perfect and prepare for marketing a commodity that those in whom he trusted told him was needed in the hospitals. There are many manufacturers and producers catering to the hospital field who are in an exactly

similar situation. They spend large sums of money to perfect materials and methods and products for use in hospitals. It is beside the question that they expect to make money out of the market. There are not so many of these people, and yet they form a large class and a class involving the employment of millions of dollars; and, taken altogether, these people are not giving to the hospital field all that they want to give or all that they are capable of giving, and the prime reason, almost the exclusive reason, for that fact is that the hospital people themselves do not take an active interest in the commodities that are being manufactured for their use. It is only the superintendent who wants immediately something advertised who writes to a manufacturer or advertiser about it, whereas, if our people would just look ahead a little bit and see where their own best interests lie, they would keep up a lively correspondence and an interchange of ideas with those engaged in the serious business of producing commodities calculated to advance the interests of the hospitals and consequently further the cause of humanity.

It is to be sincerely hoped that the hospital people will take a livelier interest in the advertising pages of THE MODERN HOSPITAL, and we can safely promise that their efforts in this behalf will vastly improve hospital commodities.

Team-Work

The dominant note in the recent Catholic Hospital Association meeting at Milwaukee was "Team-Work." Readers of papers and those who discussed them presented every conceivable viewpoint under the topic of team-work. The part that should be played by every factor in the institution was brought out; the medical staff in the team-work, the sisters, the nurses, the interns, the patients, and the public—all of these proved to be integral parts of the team-work in the hospitals. Emphasis was placed on this fact by Dr. Charles H. Mayo in his paper on "The Nature, Value, and Necessity of Team-Work in a Hospital," published elsewhere in this issue. But the real essence of the discussion hinged on the medical staff as the principal factor in team-work. Dr. Edward Evans, of LaCrosse, brought up the topic most forcibly in his paper on "The Medical Staff as a Factor in the Team-Work in the Hospital," and growing out of this discussion of the medical staff's part in the team-work grew another topic—viz., the open versus the closed door hospital, and under this head the discussion grew fast and furious. Members of the medical profession present—Dr. Evans, Dr. Bottomley of Boston, Dr. McGrath of Milwau-

kee, and others—insisted on the “closed door” as a prime necessity if good work was to be done in the hospital. No one seemed to challenge this broad contention, but there was a good deal said about the necessity, if the hospitals of the country were to be kept closed for the use of carefully chosen medical staffs, that those staffs themselves, and the profession as a whole, should grow in grace, should cultivate unselfishness, and it was even suggested that members of the profession who enjoy staff privileges should first pluck the mote out of their own eye so that they could the better see to pluck the mote that was in their brother’s eye.

Too much cannot be said of this topic. There is no doubt that the closed staff, in principle, stands for better work in the hospital, because there must be more expressive authority in a closed staff hospital. But there is no doubt also that some extremely bad surgery, some extremely unnecessary surgery, and some extremely hurtful surgery is being done by staff members of hospitals; nor is there any doubt that these staff members enjoy a peculiar freedom from criticism when they perform bad surgery, because it is rare that a hospital board of trustees, or a hospital administrator, or a fellow-member of a hospital staff will have the temerity to stand up and point the finger at a staff member and accuse him of wrongdoing—but it is so easy for the whole staff and for the whole hospital administration to point the finger at what we are pleased to call “an outsider.”

It is time for some conscience searching in the medical profession. The American College of Surgeons, the American Medical Association, and the strong special societies are contending for better hospital work, for higher standards in hospitals. We agree with this clamor, we participate in it most heartily, but we believe that the place to begin the improvement is at the top.

Comprehensive Public Health Study

The human being needs looking after by a public health worker from a period about two hundred years before his birth and until he is carefully labeled and filed away with other archives for the use of posterity.

We have not made much progress yet as to how the prenatal study shall be carried out, largely because our ancestors have failed to hand down to us sufficient data on which to base such a study. We know that they have handed down to us in more or less definite form some general conclusions, but these conclusions are based on demonstrable facts rather than on any scientific applications that we have, up to this time, been enabled to make.

Digging deep into the lore of heredity, and following along through the past forty or fifty years the few families that have made themselves especially conspicuous by the great number of imbeciles and defectives to which they have given birth, we have drawn the conclusion that heredity is responsible for most of our inherent weaknesses—physical, mental, and perhaps moral.

The very superficial study that we have been enabled to make from these family histories has shown us conclusively that the health problem is not a problem of today or next year or a decade to come, nor is it a problem of yesterday or last year: but that, in order to achieve really worthy results, we must encompass the whole period of civilized man’s existence on this planet and draw on our very limited experience for conclusions as to what the future may have in store. For instance, we know very well that people suffering from an active syphilis, and who have been treated in only a very casual way, have gone out into the pioneer places of the country, and, by reason of fresh air, wholesome food, and physical exercise, have, in the course of two or three or four generations, apparently lived down, or rather thrown off, all the stigma and taint of the disease, and have been given a fresh start as healthy human beings.

Most of us have known people almost hopeless in their moral depravity who, under new environment and in a new atmosphere, have so completely changed in all their relations to society as to make us wonder sometimes whether, after all, heredity has not been too severely blamed and whether environment has not more to do with moral obliquity than the sins of the forefathers. The child of the criminal or the drunkard has the street and the alley for his playground and the coarse, brutalized associates of his father for his companions; criminals and drunkards are his schoolmasters, and his highest ideal of warmth and comfort and plenty is what he sees on his journeys to the back entrance of the nearby saloon.

There is no doubt that, with our greater and growing knowledge of the things needed to maintain and restore health, all the people are arriving at a higher grade of health, and there is no doubt that we are now building up better futures for posterity than our forefathers did.

There comes a time, and that time seems now insistent, when a study of mankind, especially in regard to his health, promises to give greater results than ever before, because the milestones are better marked along the way. These studies of the public health are most valuable. They call for analyses, lead to deductions, and clarify conclusions that are quite as helpful to the human race

as the more scientific methods applied through statistical agencies and in the laboratories. There are pretty well defined stages and pretty comprehensive confines within which these studies can properly go. More of them ought to be made and their sum total would mean very much.

It makes not quite so much difference where we start, but, for convenience, we might begin with the child in embryo and take the pregnant mother. We not only have her present health to conserve in order that she may arrive at the end of her period safely and in good physical and mental condition, so that her child may be born normally, but we oftentimes have to think about some inherited lesion within herself—some taint of a disease that may have come down from her forbears. It is oftentimes possible to treat such a patient under the scientific methods of our time so that the imprint of the disease from which she is suffering will not leave a mark on her offspring.

Then we have the care and guidance of the mother and child in sickness and in health. We must think about prophylaxis to keep both in good physical condition. We must think about the infant's nutrition and growth, so that it may mature along normal lines. Then we have the child at weaning time, and during the teething period, when errors of nutrition are so likely to interfere with its proper development. Then comes the period between the cradle and the school. This is a critical time in the moral life of the child, when impressions are likely to be more lasting than at any other period in its life—when mental defects or idiosyncrasies, or what we may term "peculiarities," are likely to develop. This is a most difficult time of all with the child, because it is wholly subject to home observation and when it is in the care almost exclusively of its own parents, who may or may not be mentally and physically able to live up to the obligations of parenthood.

Then comes the child of school age, when the parents may have some help in their arduous duties, and fortunately we have arrived at a day when the school nurse and the school doctor begin their beneficent interference at least to call the attention of the parents to defects and deficiencies—physical, mental, and moral.

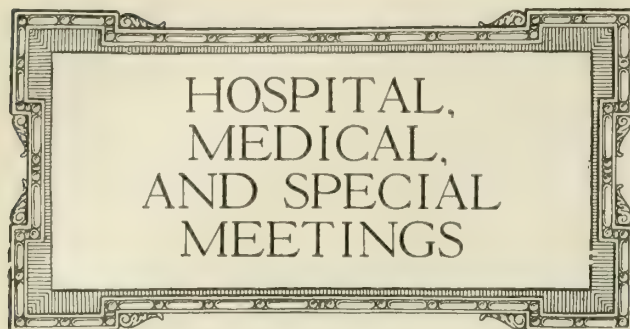
Then we come on the age of puberty, when children have arrived at new responsibilities and when they are traveling in the dark and, to them, uncharted seas. Often children have gone this far in safety, guided by their own comfort and almost by their own inclinations, but no longer do these suffice. There are pitfalls of which they can know nothing, and enemies on every side against which they must be warned and guarded.

And then comes the last stage in child life, early

adolescence, and it is unfortunate that, while we are so far in advance of our forefathers in the care of children up to this time, the deadly pace of our age raises many and new dangers in the pathway of the young man and the young woman. No longer are our children permitted only the wholesome occupations of the long ago. The trend toward the city, with the lights and color and diversions, the late hours and irregular meals, and intoxicants of drink and tobacco, and the dance, all raise up barriers, and lucky is the young person of today who can pass these in safety.

Then we begin a new study, the study of the adult—of his or her occupations, pastimes, recreations, educational processes after the teacher's influence has passed. We come to employment, the choosing of a vocation. Where children have grown to this period normally and without mishap, the selection of occupation is not so difficult. But, under the pressure of present-day competition, many young people find it increasingly hard to hold the pace—to keep up with their fellows and to succeed on their own responsibility. It is at the beginning of this period when many deficient and defectives first weed themselves out from the normal groups and take their places among the unemployed, the shiftless, and the incapable, and our chief study at this point is to determine what shall be done with this great helpless class, handicapped as they are in the warfare of life. We must help them choose occupations that their mentality can master, and there must often be many changes before many of these people can find themselves in the social order. And it is this class, the irresponsibles and the occupational misfits, that form the last class of all—the dependent aged.

It will be found an interesting study to those who are inclined to study themselves and their fellows to follow the ramifications of these several stages of man into the highways and the byways of society; it will be interesting merely as a form of occupation to study "the seven ages of man," but for those of us who have accepted a stewardship as "our brother's keeper" it is very highly essential that we make better progress than the past has made in arriving at conclusions that will help society and its individual members. We read our history of the witchcraft days, burnings at the stake, and all the rest of it, with an attitude of incredulity, and with a sure sense of superiority; we are horrified over the days of medieval Bedlam and even of the insane asylums of our own time, but we participate with equanimity in the making of laws for the confinement and punishment of people far less morally culpable than our old friend Tom o' Bedlam and others of his ilk.



American Hospital Association Gets Ready

Since our last number Dr. Winford Smith has definitely completed the program for the American Hospital Association convention at Philadelphia. Nearly all of those who have been assigned parts in the proceedings of the convention have gone to work determined to outline something that shall be of lasting value to the hospital world. More than half of the papers to be read at the convention have already been started and many of them completed.

Dr. Smith and his board of trustees are sufficiently in touch with the field to have been able to announce that without doubt the Philadelphia meeting is to be one of the largest and most successful that the association has ever had.

Dr. William H. Walsh, chairman of the committee on arrangements, has succeeded in getting up a splendid commercial exhibit, and has made a program of entertainment that will be most attractive. This program is to be published in the next number of *THE MODERN HOSPITAL*.

The transportation committee is now investigating the proposition to run special trains from different sections of the country—one down from New England to Philadelphia, one from the Pacific coast through the northwest by way of Chicago to Philadelphia, taking in the coast cities, Spokane, Denver, Minneapolis, St. Paul, Omaha, Des Moines, Milwaukee to Chicago, and thence by way of Cleveland, picking up en route attendants from the neighborhood of Detroit, and others from the neighborhood of St. Louis and Cincinnati and nearby points. The committee is thinking about another special train service to be run from the great southwest, beginning with Texas and taking in the tier of southern and southeastern states, up the Atlantic coast. Already there has been much inquiry about these special trains, and without doubt many attendants at the convention will take advantage of their opportunities for making the trip to the convention a social outing.

Definite arrangements have been made for the convention to be held in the Bellevue-Stratford Hotel, one of the largest hotels in the country, and certainly the best hotel in Philadelphia. The entire roof garden, with an area of nearly a block, has been engaged for the convention, and there is to be sufficient room for several meeting halls, including one that will hold the whole membership of the association, and other halls for large committees and special sessions. There will also be room on this roof garden for the commercial exhibit, and the architectural arrangements are such that exhibitors will have an abundant assurance that those who attend the convention will see the exhibits. Since Dr. Smith's regular program has been perfected, Miss Nettie B. Jordan, vice-president of the association, and assigned by Dr. Smith to conduct two sessions for small hospitals, has also completed her pro-

gram and it follows herewith. This program has been given an immense amount of careful consideration, and has been approved by Dr. Smith and the officers of the association, and it is anticipated that these two meetings of which Miss Jordan will have charge will be among the most attractive features of the convention.

SMALL HOSPITAL SECTION

First Session

Symposium—"The Creation and Management of a Small Community Hospital."

1. "The Survey of the Community and the Preliminary Work in Establishing a New Hospital." Dr. W. T. Graham, University Hospital, Ames, Iowa. Discussion—E. E. Munger, Spencer, Iowa.

2. "Duties of the Hospital Trustees in the Physical Management of a Community Hospital." Edward Lathrop, attorney and president of the board of trustees, Rockford Hospital, Rockford, Ill. Discussion—F. E. Chapman, superintendent Mt. Sinai Hospital, Cleveland, Ohio.

3. "Financing the Small Community Hospital." Ida Barrett, superintendent Blodgett Memorial Hospital, Grand Rapids, Mich. Discussion—Lucia Jayquith, superintendent Children's Hospital, Worcester, Mass.

4. "Building and Equipment of the First Unit of a Small Hospital." Minnie Goodnow, Boston, Mass. Discussion—Margaret Robinson, superintendent Jefferson County Hospital, Fairfield, Iowa.

Second Session

1. "How May a Hospital Superintendent Promote More Scientific Work in a Small Hospital." Mary Riddle, superintendent Newton Hospital, Newton Lower Falls, Mass. Discussion—Emma Anderson, New England Baptist Hospital, Boston, Mass.

2. "How Are the Superintendents of Small Hospitals to be Trained and Educated?" Adelaide Nutting, Teachers' College, Columbia University, New York City; Dr. Frederic A. Washburn, superintendent Massachusetts General Hospital, Boston, Mass. Discussion—H. E. Bishop, superintendent Robert Packard Hospital, Sayre, Pa.

3. "How Can the Scientific Services be Standardized in the Small Hospital?" Dr. O. L. Pelton, president Kane County Medical Society, Elgin, Ill. Discussion—Joseph Purvis, Western Suburban Hospital, Oak Park, Ill.

Round Table—Vital Problems of the Small Hospital. Discussion—Katherine Prindiville, superintendent Lawrence Hospital, New London, Conn.; Martha Oakes, St. Luke's Hospital, Davenport, Iowa; Mrs. Oca Cushman, Children's Hospital, Denver, Col.; Margaret Rogers, superintendent Jewish Hospital, St. Louis, Mo.

Hospital Section Had No Program

A large number of physicians and hospital people were greatly disappointed this year when it was announced that there would be no program of the Hospital Section of the American Medical Association at the Detroit meeting.

The executive committee—Dr. L. W. Littig, of Davenport, chairman, and Dr. John A. Hornsby, editor of *THE MODERN HOSPITAL*, secretary—were themselves greatly disappointed, but after a thorough canvass of the situation it was found that it would be extremely difficult to get up a program of which the section could feel proud.

At the Minneapolis meeting, two years ago, the house of delegates of the association passed a rule that members could read papers in only one section, and, since nearly all members of the association who attend the conventions are interested in some clinical section, and if they could not participate in the program of two sections, they naturally preferred their own. The result was that out of a large number of prominent people asked to read papers in the hospital section, only three were found available, since all of the others were tied up in clinical sections.

Another reason why the Hospital Section's program could not be effectively carried out this year was that the scientific assembly of the association has become so important that the sections and their work must be subordinated in a certain degree to the successful carrying out of the scientific assembly programs. This would make

it impossible to hold more than one or two sessions, especially in the smaller sections.

It is sincerely to be hoped that by next year the house of delegates and the trustees of the association will have created conditions under which the Hospital Section can assume the work which it so successfully instituted five years ago and which it has so successfully prosecuted ever since. It is very certain that the Hospital Section has brought the members of the American Medical Association a great fund of information of value concerning hospital activities. Heretofore members of the medical profession had almost confined their attention to their own medical affairs in their hospitals, but by the efforts of the Hospital Section it has been brought to the members of the profession that their medical interests in the hospital could be served only by high standards in the administration of the affairs of the institutions, and hence members of the profession were vitally interested, not only in medical problems in hospitals, but in the administrative problems as well. The result has been that staff members in the hospitals all over this country have been studying the problems of their institutions, and their advice has grown to be invaluable and constructive.

The Ohio Hospital Association Meeting

BY GEORGE V. SHERIDAN, Columbus, Ohio,

Executive Secretary of the Ohio State Medical Association and manager of its journal.

The annual meeting of the Ohio Hospital Association, held in Cincinnati May 24 to 26 at the Hotel Gibson, too late for the June issue of *THE MODERN HOSPITAL*, demonstrated that there is a splendid field in Ohio for an organization that will deal with the important problems of hospital administration.

Nurse training, the operation of the workmen's compensation law, the probable effect of sickness insurance on our hospitals, and the care of charity cases were among the more important topics thoroughly discussed. Representatives were present from a large majority of the hospitals of the state. One unusual feature of the convention was the large attendance of sisters from the Catholic orders, their presence indicating the interest of these orders in the solution of hospital problems.

Credit for the success of the meeting and the indicated success of the association is due largely to the persistent work of officers, and particularly to Mr. Howell Wright, of Cleveland, secretary of the association. Since the organization meeting a year ago there has been a constant effort to bring into the organization representatives of every hospital in the state.

Another interesting feature of the meeting was the commercial and scientific exhibit. Many large manufacturers of hospital supplies and equipment were represented, and several of the large hospitals presented exhibits showing special methods developed in the different lines of work.

Considerable criticism was directed against the Industrial Commission for its method of dealing with hospitals under the workmen's compensation act. The attack was led by Dr. W. S. Hoy, of Wellston, representative from Jackson county, who announced that if he is reelected to the Legislature he plans to introduce legislation designed to correct some of the present abuses. He was answered in person by Dr. William H. White, chief medical examiner for the commission. At the conclusion of a rather extended debate the association adopted a resolution authorizing the appointment of a committee of three members to study the operation of the law as regards its effect on hospitals

and the sick in hospitals, and report at the next annual meeting. It directs that this committee shall cooperate with a similar committee which was appointed two years ago by the State Medical Association.



REV. A. G. LOHMANN,
NEWLY ELECTED PRESIDENT OHIO HOSPITAL ASSOCIATION.
Superintendent German Deaconess Hospital, Cincinnati.

Criticism of the Industrial Commission was directed chiefly against the arbitrary cutting of bills. In the discussion it was brought out that many hospitals are refus-



HOWELL WRIGHT,
REELECTED SECRETARY-TREASURER OHIO HOSPITAL ASSOCIATION.
Secretary Hospital Council, Cleveland.

ing to take Industrial Commission cases unless the employer personally guarantees the full amount of the charges, regardless of action by the commission.



Members attending the meeting of the Ohio Hospital Association, Cincinnati, May 24-26, 1916.

Hospital executives objected to the allowance by the commission of \$28 for special nurses, pointing out that this allows but \$3 a week for board, which costs the hospital \$7. Several emphasized the fact that the commission's so-called economy in restricting the number of dressings is largely responsible for the high rate of infection attending commission cases. If the commission would permit more frequent dressings, infection in many instances would be avoided. The legal limitation of \$200 operates harshly against hospitals. It was pointed out that this hardship is particularly noticeable in corrective operations in cases where the \$200 was used in the preliminary treatment, and where corrective work is necessary later in order to save the patient from permanent disability. Another abuse which operates against the hospital is the failure of the commission to promptly certify as to whether the patient is entitled to state care. Several executives reported that after patients had left the hospital the commission reported that they were not entitled to compensation, and the hospital, of course, holds the bag.

Dr. White, in meeting the various criticisms, called attention to the tremendous increase in the volume of business handled by the commission. With a decidedly limited medical staff, they are passing on about 500 cases daily and mistakes necessarily occur. He outlined several innovations which have been made, and promised more satisfactory administration of the department in the future.

He agreed that the \$200 limit should be modified, pointing out that, if the state had more money to spend for corrective work, many thousands of dollars could be saved through a reduction in disability costs.

It is hoped to bring about a more satisfactory administration of the hospital, as well as the medical practice features of the law, through the committees now representing the hospital and the medical associations.

NURSE TRAINING

The friction that has developed between the large and small hospitals of the state over the subject of nurse training brought about by the operation of the new nurse registration law was rather marked at the convention. After a rather acrimonious debate of the proposition, the convention adopted the following resolution:

That the question of the regulation of the State Medical Board concerning the minimum number of patients, per daily average, be referred to a special committee, to be reported on at the next annual meeting of the Ohio Hospital Association.

This action was not satisfactory to a number of the members of the association representing the smaller hospitals. Headed by Dr. Hoy and Drs. Cherrington, of Logan, and Dr. Pool, of Port Clinton, a number of these announced their withdrawal from the association and the organization of a rival group. They further announced that they had incorporated under the name of the Ohio Hospital Association, an action that may develop a legal contest regarding the right to use this title.

A very interesting evening session was devoted to the subject of state sickness insurance and its probable effect on hospital administration in Ohio, led by Dr. E. R. Hayhurst, of the state health department. Dr. Hayhurst believes that sickness insurance will greatly increase the number of hospital cases—that the sick will be treated in hospitals, and that ambulatory cases will be cared for in dispensaries, and that treatment of the sick in the home will be greatly decreased. He figures that the entire cost will total only about 3 percent of the total now paid for wages. He advised hospital executives to consider the matter carefully because of the probable legislative consideration of the question in Ohio. Dr. Hayhurst strongly believes that socialization of medical service is coming, and that it will provide better service at a decreased cost.

Dr. A. C. Bachmeyer, superintendent of the Cincinnati General Hospital, declared that sickness insurance is sure to come, and that doctors in hospitals must be prepared to meet it. Dr. C. L. Bonifield rather doubted the feasibility of such insurance, pointing out the fundamental differences between conditions in this country and in Europe. Dr. H. K. Dunham agreed with Dr. Bachmeyer, however, and urged medical men to do everything possible to aid in the movement, pointing out that the development of the system would be a tremendous aid to public health work, and is practically the solution of the tuberculosis problem. He declared that, from a medical practice standpoint, it has been successful in every way in England, and that prior to the war the average income of the English physician had been materially increased by its operation.

The extent of the community's obligation for the care of indigent sick and injured was cleverly presented by Mr. Fred. S. Bunn, superintendent of Youngstown City Hospital, and by Father M. F. Griffin, of St. Elizabeth's Hospital, Youngstown. They detailed their varied experience in dealing with the city's indigent over a long period of years, which led up to the present satisfactory plan under which the city pays the hospital \$1.75 per day per patient.

Dr. C. G. Souder, of Toledo, superintendent of Lucas

County Hospital, explained the methods by which the anti-tuberculosis hospital propaganda has been developed in Ohio, and detailed in an interesting manner the entire field of tuberculosis sanatoriums.

Dr. Christian R. Holmes, chairman of the Cincinnati Hospital Commission, and Dr. Charles F. Hoover, professor of clinical medicine at Western Reserve University School of Medicine, were the speakers at the annual banquet of the association. Dr. Holmes dealt chiefly with the problems of medical education and nurse training, and advocated the elimination of commercialism from the latter as well as from the former. Dr. Hoover took as his theme the proposition that a hospital must be more than a mere place to treat the sick, and gave interesting points relative to hospital management.

The following officers were elected for the following year: president, Rev. A. G. Lohmann, superintendent of the German Deaconess Hospital, Cincinnati; first vice-president, David Workum, Cincinnati; second vice-president, Miss M. A. Lawson, Akron; third vice-president, Miss Mary E. Jamieson, Columbus; secretary-treasurer, Howell Wright, Cleveland. The executive committee is composed of Fred. S. Bunn, Youngstown, chairman; Rev. C. H. LeBlond, Cleveland; Dr. E. R. Crew, Dayton; Miss Mary M. Roberts and Dr. A. C. Bachmeyer, Cincinnati.

Catholic Hospital Association Meeting

More than 300 sisters, in charge of Catholic hospitals, representing every section of the country from Maine to California and from Winnipeg to the gulf, a large number of physicians representing medical staffs in Catholic hospitals, many chaplains in these hospitals, and a miscellaneous number of trained hospital workers holding positions in Catholic hospitals, met in Milwaukee on the morning of June 7 to attend the second annual convention of the Catholic Hospital Association.

The Rt. Rev. Archbishop Messmer, of Milwaukee, celebrated high mass to inaugurate the three days' meeting, and the convention was called to order by the President, Rev. Charles B. Moulinier, of Marquette University Medical School, who delivered a notable address, which is published elsewhere in this issue.

The six sessions of the convention were remarkable for the enthusiasm and interest displayed by those in attendance, and, what is even more remarkable, a new precedent was set in hospital councils in this country by the active participation of some of the sisters themselves, one of whom, Mother M. Esperance, of St. Mary's Hospital, Minneapolis, wrote and read one of the best papers delivered at the meeting.

The whole meeting was practically given over to the discussion of the one topic, "Team-Work," and the lights and shadows of team-work were shown in every variation. Dr. Charles H. Mayo, who since the meeting has been elected president of the American Medical Association, led off with a discussion of "the value and necessity of team-work," and thereafter the subject was taken up in every phase—team-work on the part of the medical staff, the intern as a factor in team-work, the sisters as team-workers, the public and the patient and their part in the team-work.

Last year, when the Catholic Hospital Association met, the capacity of Milwaukee as an entertainer was taxed to the utmost to provide accommodation for the 125 sisters who were present, and it was greatly feared, almost to the time of this present meeting, that arrangements



REV. CHARLES B. MOULINIER, S. J.,
PRESIDENT OF THE CATHOLIC HOSPITAL ASSOCIATION.
Regent of Marquette University Medical School, Milwaukee.

would be impossible by which the sisters could be accommodated during the three days' meeting; but as a great blessing came an offer from the new St. Catherine's Hospital, just completed and being furnished, to accommodate



BERNARD FRANCIS McGRATH, A. B., M. D.,
Secretary of the Catholic Hospital Association, 1916-17.

the sisters with sleeping and eating quarters, and more than 200 sisters were domiciled there; the others were scattered around the city in different Catholic hospitals and similar institutions.



Sisters attending the meeting of the Catholic Hospital Association, Milwaukee, June 7-9, 1916.

There is a good deal of talk among the new officers of the association of having the meeting a year hence in Chicago, and undoubtedly the executive committee has to take early action to see whether proper housing and meeting accommodations can be had in Chicago for the purpose.

Immediately following the Milwaukee meeting a large number of the sisters made arrangements for a stay in Milwaukee of a month or six weeks, during which time Marquette University Medical School is to give courses in the various scientific departments of hospital work. The subjects of pathology, including bacteriology, serology, and tissue pathology, will be taught to an extent that will serve the nursing purposes of the sisters; the x-ray and its many variations will be taught, also dietetics, principles of administration, bookkeeping and accounting, domestic management, the purchasing and distribution and use of supplies. Father Moulinier was fortunate in securing a considerable appropriation from a large educational foundation, and with this generous contribution he was able to secure the services of a number of trained people to participate in the teaching in this six weeks' course.

Some of the members of the association were greatly surprised when, on the reading of the report of the treasurer, Sister Marie, of Misericordia Hospital, Milwaukee, they learned that the association already has a fund of approximately \$1,000 with which to meet its obligations and to expand in its usefulness. The prediction, moreover, was freely made that before another year had gone round the association would include in its membership nearly all of the 500 Catholic hospitals in this country.

Although not publicly announced, it may be stated that it is the intention of the president, Father Moulinier, to devote the next year's session to a discussion of the principles of standardization, and it is the expressed intention of Father Moulinier to assign various subheads under this topic to members of the association long in advance of the meeting, so that they may be enabled to give some

intensive study to it, and so that they may be enabled to come to the meeting with some clearly defined notions and proposals in the matter of the standardization of various classes of hospitals.

There was a very grave question during the whole meeting as to who should be its next president. Last year Father Moulinier, very much against his inclinations, accepted the presidency because it was urged on him that, as he had instituted the association and had done all of the details, and had worked out all of the ideals concerned in its creation, it was necessary for its successful launching that he should accept the presidency. Father Moulinier's health has not been of the best during the past year, and, added to his other work, the details of administration of the association's affairs have been a great care and drain upon him; and, while there was an inclination to release him from further duty in the actual work of the association, it was also felt that the association was not yet old enough and had not had experience enough to go along under new leadership, and Father Moulinier was again drafted as the president for the coming year.

Other officers of the association are Mother Joseph, superintendent of St. Mary's Hospital, Rochester, Minn., first vice-president; Mother M. Esperance, St. Mary's Hospital, Minneapolis, second vice-president; Dr. B. F. McGrath, Marquette University Medical School, Milwaukee, secretary; Sister Mary Rita, St. Joseph's Hospital, Milwaukee, treasurer; Dr. J. T. Bottomley, Boston, and Sister M. Regina, Mercy Hospital, Wilkes-Barre, Pa., the two members of the executive committee.

Address of the President of the Catholic Hospital Association¹

REV. CHARLES B. MOULINIER

While the major part of the human race today is actually engaged in the destruction of human life, we are gathered here in earnest and conscientious deliberation on the

¹Delivered at the meeting of the Catholic Hospital Association, Milwaukee, June 7-9, 1916.

problem of conserving human life. The entire mind of practically all the peoples of earth, with its main energies of thought, invention, and administration, is taken up with the awful purpose of bringing ruin and chaos to the lives, property, and social fabric of their fellowman. The laws of physics, mechanics, and chemistry are being used with all the acuteness and skill of the most accomplished expert to kill human beings, to destroy the property of others, and to overturn the great structures of art, industry, finance, and government that have been the pride and boast of our modern civilization. The laws of God, of ethical righteousness, and common human justice are being violated to a degree never before equaled in the history of the human race.

We are in the midst of a cataclysmic upheaval in all the fundamental elements of our human life. New valuations of the things that enter into life must necessarily grow out of the chaos and crime of these epoch-making times. Out of national and individual pride and greed there is apt to grow a more restrained and balanced sense of national and individual honor and right to property; out of a grossly materialistic and utilitarian philosophy of life values we may confidently look for a strengthening of the spiritualistic truths and fixed ethical standards of a sound and safe morality; out of a godless Machiavellian diplomacy, out of a widespread apostasy from God, of nations and of individuals, we may, I believe, look for a return of greater reverence for God and his laws on the part of individuals and peoples; out of the confusion and catastrophe of racial hatred there will gradually emerge a new and strong racial brotherhood; out of a selfish and tyrannic rule of dynasty, oligarchy, and plutocracy, there must come a broader, saner, and more saving rule of an ever-growing and chastened democracy; and finally be it said, with all the emphasis and unrestrained praise of which words are capable, in the midst of and out of the mad fury of human carnage now deluging the earth with fratricidal blood, there looms up with all the glory of the new Jerusalem the brave, modest, unselfish, and highly trained service of doctor, nurse, and priest in unremitting toil to save body and soul from suffering and sorrow and death, if it may be, for a healthy and a useful life for God, for race, for nation, for family, and for self. The world stands in salute of honor and praise to the brave, self-sacrificing men and women of the triple profession of world-wide, peaceful, life-saving service.

Ladies and gentlemen, what is going on in Europe today is simply an extreme crisis of conditions which brings into relief and perspective the basic elements of the race-wide problem of the conservation of human life. In peace or in war, the problem is essentially the same in its deeper aspects, though vastly different in many major and minor matters of administration.

This Catholic Hospital Association was organized for the purpose of studying the problem of the conservation of human life and working out the best solution of this matter from the side of efficient hospital service. I shall, therefore, state the problem as I see it, setting forth the factors that go into the problem and then try to work out the solution.

1. The problem of the conservation of human life is as large, as clear or obscure, as simple and as bafflingly complex, as is the problem of individual and social health or sickness. It we all were born, if we all lived, and if we all died in good health, normally, by simply ceasing to functuate physiologically, without wear or tear or deterioration of tissues and organs, there would be no health problem, there would be no medical profession, no nurses,

and the clergy would have a much more easy and comfortable time than they are even now reputed to have. The stern facts of life are, however, far otherwise—we are born in travail, we live in travail, and we die in travail. We are born in trouble, we live in trouble, and we die in trouble. This poor, human flesh of ours is heir to a thousand ills whose prevention, alleviation, and cure form the object of that large and ever-growing group of sciences called medicine. As the centuries have melted into the past, the mind of man has searched with ever-growing curiosity into the secrets of nature's processes. Out of this patient, serious, and devoted search after the truth, as embodied in the workings of the physical universe, there have grown the sciences of physics, mechanics, chemistry, and the great, complex science of biology. Medicine is nothing more than the application of these sciences for the prevention, alleviation, and cure of disease in man. In a very true sense this complex of the sciences called "the healing art of medicine" is in its infancy, but it has so large a growth and so complex an organization already, even in its youth, that it has already become the most exacting science in the whole curriculum of education. This growing reach and complexity of medicine is due to the simple fact that man, in his bodily and mental makeup, in his ever-growing and widening interests in life, in his forward march into the intricacies of an ever-spreading civilization, finds himself, at every turn, called on to face the physical, mechanical, chemical, and biological risks incident to the social, industrial, political, and strongly complex economic life of today. It is to conserve human life in the midst of such an environment that the doctor, the nurse, and the clergyman are engaged in a triple alliance, offensive and defensive, for the preservation of the human race.

2. The facts entering into this problem are many, varied, and of strangely interlacing cooperation. We are all sworn, vowed, pledged, to the saving of the patient, and we, each of us, all of us, the whole world, the whole race, is the patient. And yet we must divide ourselves off as factors in the problem into the patient, the medical profession, the nursing profession, both within and without the hospital; the State as responsible protector, financial assistant, and legal, just regulator; and the Church as the source of inspiration, the patron, and moral and religious guide and collaborator. All these factors enter into the problem of the saving of human lives, and now, with the problem and the factors before us, how is the solution to be worked out?

3. The solution will come from a deep and broad education in the things of human health on the part of the patient, of profession, of nurses, of the State, and of the Church. This hospital convention gave its attention last year to the subject of education in the care of the sick, and this year is devoting its whole program to a consideration of another element that will bring about a solution of the problem—viz., cooperation. "Team-work" is the familiar phrase we have chosen to apply to the essential thought of this year's program, a lofty and unselfish working together on the part of the patient, nurse, doctor, and all others concerned.

At this point I wish to emphasize a few considerations which seem to me vital in securing the team-work which is necessary to bring about the best results for the patient. I put down as a fundamental postulate of what I am going to say that every patient today who is able, either by his own efforts or the efforts of others, to receive the institutional treatment of a hospital, has a moral and social right to the most scientific and efficient service

that the medical knowledge and skill of today is able to furnish. If this postulate be admitted, then it follows as a necessary conclusion that every hospital which claims to be doing the work of up-to-date medical treatment must be prepared in every respect to furnish such treatment. This means an educated and skillful staff of doctors, an educated and skillful corps of nurses, an educated and skillful administrative board, an enlightened public, and a wise governmental regulation.

With all these things secured in the hospital, the patient must then become the patient of the staff of the hospital, of the whole institution, and not of the particular doctor or the individual firm of doctors. The patient must be the beneficiary of all the knowledge of all the workers in the hospital, from the highest to the lowest. The theme we are to consider in our present meeting will bring clearly and forcefully, and from every point of view, this thought to the minds of all here gathered. All small impulses, every selfish interest, each ignoble aim, whether on the part of staff or nursing corps, or whether on the part of the administrative officers, must give way to a lofty and unselfish spirit of cooperation; otherwise, the patient will not be getting from the hospital what he is morally entitled to—the best that present-day medicine can give by way of medical service.

I know that such an ideal result is difficult of attainment. There are comparatively few hospitals in this country which have a closed staff of doctors carefully organized. There are perhaps no hospitals in this country where the patients go as patients of the hospital, and not of the particular doctor who sends them there, and so there are very few hospitals in which the patient receives that careful group diagnosis and cooperative treatment to which he is entitled from the medical profession of today.

In this day of ever-broadening and deepening social and industrial complexities there are few, if any, hospitals which give time and care and skill to bring about the far-reaching beneficent influences of social medical service. And now I ask flatly, why are there so many deficiencies in the service that is rendered to patients in the hospitals of our country today? My answer is, that all concerned in the service do not know all they should about it; in the second place, they are too selfish and low-motivated to cooperate sincerely and consistently; in the third place, the public does not know, appreciate, and give sufficient financial support to hospitals to enable them to give this fine, perfect service; and, finally, the patient himself does not lend himself, with wise and considerate patience, to the slow at times, cautious always, and ever scientific treatment which the advanced knowledge of today is capable of giving him.

In a word, there is want of proper cooperation from every quarter in the working out of this greatest problem, of this problem of our civilization—the conservation of human life. There is not enough cooperation from all concerned in the matter of knowledge, in the matter of unselfish purpose, in the matter of financial aid, in the matter of wise administration. We must know more, we must become less selfish, we must become more generous, and we must be wiser than we are—all of us, patient, public, doctor, nurse, and institutional heads. It is the purpose of this gathering to get some of this knowledge, to elevate some of our motives, to convince those who have that they should be generous, and to make it clear to all that cooperation is the one great social virtue which we all need for the true solution of the problem of conserving human life.

What the Physician Should Contribute to the Team-Work¹

BY E. EVANS, M. D., La Crosse, Wis.

In spite of the fact that I may say some things that will be better said by others during the course of this meeting, I want to introduce my remarks on what the doctor can do for "team-work" by saying something about hospitals and especially about the so-called "open hospital," which most of the sisters' hospitals are.

I think it is quite fair to say that there are two inexcusably vicious institutions in the United States today—(a) the county jail, the educator of criminals, and (b) the open hospital, the shielder of criminals. No one, I think, will dispute this charge against the county jail. That the open hospital is potentially, if not actually, a menace can, I think, on many grounds be proved. It too often shields work done so improperly or so imperfectly as to be open to the charge of being so far from what it should be that we are not stretching language very much if we call it criminal. This, of course, is not true of all "open hospitals." Nor do I think it is true of most of the men working in "open hospitals;" but because of the wrong conception of what a hospital is, because of the attitude of the administration of so many hospitals who feel that the hospital must be filled at all costs, and that the success of a hospital is measured, not by the character of the work done, but rather by the amount done, much poor work and much unnecessary operating is condoned. Many men with improper training, incapable of doing medical, let alone surgical or other specialized work, are allowed all the privileges of the hospital without any supervision. Properly conducted, every hospital should be a great factor in the community for social uplift, a center from which should radiate knowledge and health and physical education. It should be an ideal, a big idea, not four walls—merely a boarding house for the sick. A hospital is not only a place for the performance of brilliant operations and the feeding and nursing of sick people. In fact, I think it is well to look on these duties as in a measure incidental, valuable, of course, in conserving and preserving life, but, aside from these duties, the greatest function of a hospital and its chief excuse for existence is that, while doing these things for the sick and in the very best way, we are acquiring new knowledge, finding better means for investigation of disease, and discovering better modes of treatment, whether surgical or medical.

A hospital answering such a conception as this must have scientific equipment and men on the staff sufficiently expert to use the same. It must have well-trained, highly educated nurses devoted to the scientific pursuit of their calling, and it must have a management that has a keener eye to the scientific care of the sick and the preservation of the health of the well than it has to the acquisition of the pocketbooks of the sick. In such a hospital, with a staff of medical attendants with high ideals and careful scientific training, have the staff or a committee of them hold frequent frank conferences with a committee of the administration at stated intervals—say, quarterly; let this staff (every one of them) hold frequent conferences with each other to discuss and diagnose the cases under treatment in the hospital, and we would approach an ideal hospital, where there would be no question as to there being well-equipped laboratories and well-selected libraries, where interns will be alert and contented (not so usual an occurrence now), and where—what, after all, is the central problem—the patient is not maltreated.

¹Read at the meeting of the Catholic Hospital Association, Milwaukee, June 7-9, 1916.

I wonder how many hospitals in the state of Wisconsin or in the United States having less than 50 or even 100 beds, conducted by the sisterhoods, have a well equipped laboratory, where the scientific investigation of cases may be carried on. How many of those hospitals have a library where the interns may find works of reference and standard text-books, as well as current magazines, for the purpose of looking up literature on the cases coming under their observation? It will be very interesting, indeed, to note how many hospitals, under the inspection to be made by the American College of Surgeons, will come in class "A."

Again, what about hospital bookkeeping? Can you imagine a department store or any business conducted without a proper system of bookkeeping! The merchant must not only know what he pays for his goods, including cost of having them laid down on his shelves, but he must also know what it costs to retail them before he can estimate his profits. Then, if he is a wise, successful business man, he must know how those goods please, how they wear, how they fit, etc., and he must have a careful record of all this so that he may know how best to make future purchases. How about hospital records, my dear Sisters Superior, in the hospitals over which you preside? Have you the merest essentials beyond the name, address, and whether the patient's bill is paid, for every patient who has entered your hospital, say, during the past ten years? Too often, I am sure, proper, complete histories (which Murphy truly says comprise more than 75 percent of diagnoses) are seldom to be found. Classification, cross-indexing, and follow-up records are, I am sure, most often unheard of. I believe when this inspection and standardization of hospitals is made that you will find much more stress laid on the hospital library, the hospital laboratory, and the uses made of them, and the properly kept records of the hospital, than you will on splendid buildings, excellent furniture, and showy reception rooms.

The concrete hospital problem resolves itself into (a) administration, (b) staff, (c) patients, especially the great so-called middle class (for the rich and poor are more fortunate than those), (d) the public at large (for social and economic reasons). Of these four divisions, "c," the patient, is by far the most important part of the problem. Next to "c," "d" is the most important; "a" and "b" exist only for the service of "c" and "d," and there is no justification for their being, except proper service to these. I believe there is needed a complete change in the administrative conception of what a hospital is and should be. We have heard much of the "surgical conscience." In future we must in hospital work insist on hearing more about the "administrative conscience." I know that when a religious order has invested a great sum of money, as so many of you have done, you necessarily feel great anxiety as to the success of the undertaking. You feel, and justly, that it is necessary to make your hospital an economic success. Then, too, you are the buffer between contending doctors and cliques of doctors, and, good and religious as you are, you feel that, following the behest of your Savior, it is best to have "peace at any price." When you get in this frame of mind and are afraid to do the right thing—feel a little bit fearful of refusing the advantages of your hospital to this or that improperly trained internist or surgeon, for fear of the prestige that he may be able to carry away from your doors—just remember that "peace at any price" was not the greatest lesson taught by our Savior. Above everything else and before everything else, Christ placed "righteousness at any cost."

Next to the patient, the most important factor in the hospital problem is the public. The community in which a hospital is located has the right to demand, because of the social and economic problems involved, a high standard of service. They have the right to know that citizens of their community entering there shall get the very best service possible. To get other is to throw back on the community a burden just as real, and often just as serious, as is the burden of the criminal, who, after his first minor offense, has been trained and educated in the county jail. I feel that very soon every hospital worthy of the name in all cities with a population greater than 25,000 (and perhaps much smaller) should have not only a free dispensary, but a continuous social nurse service. I feel sure that the time is not far distant when the sisters themselves engaged in hospital work will find that their best service will be done, not in the wards of their hospitals, but in the homes of their convalescing patients.

With a hospital based on ideals such as I have endeavored to outline, it should be easy to have ideal doctors contributing their quota to the "team-work." It perhaps would be far easier to draw a portrait of the ideal doctor than to always secure him for such hospital service. In the first place, the ideal doctor should be a man of broad education, one whose preliminary training in the basic sciences on which medicine rests has been so thorough that he can grasp, in good measure, the complicated science of medicine. His medical training should have been secured in one of the better medical schools, or he should be such a student and so devoted to his profession that, if trained in one of the poorer schools, he has been able to overcome his disadvantages by hard study, close application, and frequent post-graduate courses. He should be a man with not only a high moral sense of duty, but with a well-trained and well-developed social conscience. His interests must not be only in the hospital, but in the community of which the hospital forms a health center. His other qualities should be dominated by good common sense. To be a power in the hospital, a factor in "team-work," he must be capable of working harmoniously with other members of the staff, helping to direct, uplift, and harmonize the men in attendance, with freedom from envy and absence of jealousy or heart burnings at the success of his coworkers. He must be able to cooperate with and harmoniously assist the administrative side of the hospital management. He must be eager in his desire to secure and use every scientific means for the careful and proper investigation of his patients in the hospital, and also be willing to assist in the diagnosis and treatment of the patients under the care of other members of the staff. He must encourage not only by word of mouth, but by continuous and intelligent use of the instruments of precision, the administrative officers in keeping up and fully utilizing a well-equipped laboratory and a well-stocked library in the hospital. This attitude will necessitate his giving a great deal of time to the interns, who must be carefully chosen from good schools if he wants to have good work done; and, if his clientele is at all large, he must also necessarily have well-trained, and this means well-paid, assistants. No matter how long he has served on the staff, or how well established or prominent he has become either in medicine or surgery, he must always be willing to give his time and knowledge to the training and education of the nurses in the training school attached to the hospital. With scientific idealism, hearty sympathy with his coworkers, and ready cooperation with the administration, and with every assistance given to interns and nurses, so that they will feel that they are getting full value for

their time, he cannot fail to work up an enthusiastic co-operation among those working with him which will produce the best possible results for the patients in the hospital.

I have been impressed with an article recently appearing in the *Journal of the American Medical Association* describing how ten specialists attending St. Luke's Hospital, San Francisco, have combined for diagnostic teamwork for the benefit not only of their own patients, but for those of others who may be referred to them for investigation. Such a spirit of team-work I would like to see spread everywhere. This spirit of cooperation and enthusiasm must bring to the hospital the best class of probationers for professional training as nurses, the best class of interns, and a spirit of loyalty and assistance on the part of the administration that will build up a hospital that must redound to the welfare of the community where it is located. It will be an institution, the very antithesis of a boarding house, for sick, and will create a spirit in the community the effect of which must be far-reaching in bringing about a higher standard of professional attainment among those doctors already practicing there, and will tend to create an unhealthy atmosphere for the mere money-getting practitioner or quack. It will rapidly bring about the elimination of the commercial hospital—as rapidly, let us hope, as the commercial medical school has been eliminated; and it will leave us but one great problem before an ideal medical situation has been attained—the elimination of the commercial doctor.

I cannot close this paper without expressing my appreciation of the good that must be accomplished by this splendid gathering of sisterhoods engaged in the conduct of hospitals. Justly or unjustly, too often the charge has been made and is made that, while sisters' hospitals are good boarding houses for the sick; that while they minister to every craving of the humanly afflicted most sympathetically; that while no labor is too onerous, no sacrifice too great for the patient, be they rich or poor, they do not give to scientific medicine and to scientifically trained practitioners desirous of doing the very best possible work that encouragement to which they are entitled by providing expert, specially trained, scientific nurses, be they sisters or lay nurses; that they do not procure the highest class of interns, nor the necessary number, to do the best work; and, more especially, that they do not supply that scientific equipment both in instruments and books that is necessary for the proper pursuit of scientific medicine. How true this charge is will be proved when, after proper inspection, the hospitals are classified as the medical schools have been classified. Personally, I must say that for twenty-five years my work in a sisters' hospital has been encouraged by the heartiest cooperation on their part; that they have been alive to the requirements of the situation; that where we have fallen short has often been because I did not urge strongly enough or move fast enough where scientific medicine beckoned, and I trust that, when the roll is called, the sisters' hospitals throughout the United States will be—as is the sisters' hospital at La Crosse, where I work—in class "A."

What the Patient Should Contribute to the Team-Work¹

BY W. E. FAIRFIELD, M. D., F. A. C. S., Green Bay, Wis.

The thought that possibly the patient may be taught to contribute to the successful operation of a modern hospital may appear a bit strange to those who have looked on

him as "material" to be molded or exploited, as the needs of the institution and the fancies of the attendant shall direct.

You will all freely admit that a modern and well-organized hospital, balanced and equipped in every department, would present a sorry appearance without the subject of my paper, and you must therefore also admit that he is a part, and not a small one, of the institution we know, and whose material and scientific advancement we are aiming to promote.

Some philosopher has said that the "education of the child should begin with the parents." We all admit the wisdom of the assertion, and I will ask you to make a practical application of this philosophy and assume with me that the education of the individual patient must and should begin with the education of the great public, particularly as it applies to the ethics of the temporary relationship made necessary by residential treatment in a hospital.

It is manifestly impractical to give *a priori* instructions to a patient about to enter a hospital. The individual who is suddenly attacked with gallstone or renal colic is in no frame of mind to listen to dissertations on his duty or his contribution to the teamwork in the hospital to which he is about to be removed. His suffering and his anxiety are not conducive to absorption of knowledge along these lines. He feels that he is doing quite enough when he submits his anatomy to the tender mercies of the staff and attendants, and so one must dismiss the thought of imparting knowledge to the emergency patient at least.

It is notorious, however, that the patients of certain physicians and surgeons give a great deal of trouble in a hospital, while those of others give very little. I think that there are various explanations for this lack of uniformity, the principal of which is absence of faith in the physician or surgeon on the one hand and possession of it on the other.

The patients of the surgeon who secures his cases because of the community faith in his judgment and skill are much more apt to cooperate with the hospital authorities than are the patients of him who depends not on skill so much as on his religious or lodge affiliations, his hyphenated Americanism, or the social position of his wife.

The first axiom, then, resolves itself into this—to secure the cooperation of the patient, one must be assured of the patient's faith in his attendant's skill. Having established this psychology, it will be comparatively easy to secure patient and appreciative attitude pending the long and tedious processes of diagnosis made necessary by such conditions as cancer of the stomach, duodenal and gastric ulcer, organic and functional diseases of the kidneys and bladder, not to mention many others.

The second desideratum is to secure such passive assistance from the patient as will make possible arrival at an honest diagnosis, if not at a correct one. In this, one must have the assistance of everyone who comes in contact with the patient. Not only must each one impress the patient with the fact that the disagreeable features of the examination are unavoidable, but that every care is being taken to render them as unobjectionable as possible.

I recently visited a very imposing institution. In looking about I discovered an intern doing gastric lavages at a slop sink. Now, I submit that the appearance of a nurse with a bed-pan which was emptied into the receptacle was not conducive to the contentment and complete satisfaction of a discriminating patient.

While the patient must be taught that he should cheerfully submit to all the examinations required to arrive at

¹Read at the meeting of the Catholic Hospital Association, Milwaukee, June 7-9, 1916.

a correct diagnosis, and that the physician should have credit for the painstaking and conscientious labor he puts on the case, yet no encouragement should be given to exploitation.

In a hospital I recently visited I became interested in a very pretty little girl of about four years, and I asked a nurse if I might read her history. A voluminous mass of literature was brought in, on which was recorded such data as the number and condition of her teeth, examination of blood, feces, urine, and, of course, a Wassermann. Tiring of the reading before I arrived at the diagnosis, I turned to the little one and said, "What is your trouble, my pet?" The answer came like a flash, "I put a bean in my nose." Now, I am willing to submit that we in Green Bay, who do not make a Wassermann for "a bean in the nose," should not be reproached for our unscientific handling of cases.

Murphy has recently said that a man using his formalin glycerin joint treatment should be expected to put some brains back of it. It is a forceful saying, and it applies to everything we do in life, as well to the selection of a weapon with which to commit suicide as to the choice of an instrument to be used in an examination. But great care may sometimes be disastrous. To use an applicable illustration, we should commend the making of a Wassermann examination in the differentiation of an enlarged middle prostatic lobe from disturbance due to a tabetic bladder, and likewise we should condemn the slow processes of a complete laboratory examination in a suspected perforated duodenal ulcer.

I beg your charitable indulgence when I appear to digress from my subject proper, and ask you to bear in mind that I am contending that the cooperation of the patient must be secured, first, through his education to the point of being able to discriminate between a surgeon and a taxidermist, or a physician and a member of the ladies' sewing society.

The trend of human thought has always divided people into classes and sects, and this division inevitably results in antagonism between the masses so segregated. We find it in politics, where we have the Progressive and the Reactionary. It is further exemplified by a separation of the rich and the poor, the noble and the plebeian, the educated and the illiterate, and even in the religious world we have the Protestant and the Catholic, the believer and the agnostic. Unfortunately a habit so universal has spread its blighting influence on the individual who seeks relief by entry into a modern hospital, and his actions can often be explained only on the theory that he believes the hand of the surgeon or physician as well as the hands of all his attendants are turned against him, and he must therefore defend himself against exploitation rather than attempt to cooperate with those whose best endeavor it should be to drive away pain and despair, and replace these with health and hope.

If there is reason for this lack of cooperation, then we should seriously examine ourselves and ask the question, "Am I giving such service as I would ask to be given myself or to a member of my family in like circumstances?" If one's reply cannot be "yes," that one is a menace to the good relationship which should exist between the patient and the institution.

While I am here to criticise the actions of the patient when they do not conform to his own best interests, I am also here to defend him from assault, and to say in his behalf that it is perhaps a good thing for him that he is not too confiding and submissive in a state and age when the decision to remove such a vital organ as a kidney or

spleen too often hinges on the sole question, "Will he stand the operation?" I am here to defend him against the meddlesome curiosity of the unfit, and to criticise in no uncertain terms the hospitals which fill their beds with the patients of men who have neither training nor adaptation to make accurate diagnoses or to develop technic in their work. I contend that the hospitals should not be blind to the exploitation of patients, and that when they shall have taken a firm stand on the side of common justice, if not of common decency, they will say to the charlatan and to the unfit, even if trained "surgeon," "We will not become a party to your unskilled and bunglesome efforts, and, if you wish to continue to do surgery or other work which requires skill and experience, you must qualify yourself before you can become connected with this institution." And it is not only in surgery that the patient has a cause for complaint. The medical and diagnostic end of practice are as badly managed, if not more so. Young men are being graduated and given internship in hospitals who have no experience and no dexterity, and yet to these young men are given work which requires the greatest skill. It is a crime to allow such an individual to pass a metal sound, and yet into his hands is placed the cystoscope and the ureteral catheter. A splendid contribution to teamwork on the part of the patient would be to have him so informed that he could discriminate between the skilled and honest and the unskilled and unscrupulous, and the first step to this end is to teach him that there are both classes.

The patient has something else to contribute besides the use of his body and the provision of a fee, and the hospital is singularly well placed to practically demonstrate this by refusing the patients of the unfit. Systematic and well-directed effort by the profession and the hospitals to educate the patient to a just appreciation of medical and surgical skill is necessary, so that he may by reason of that knowledge recognize and shun the dangerous attentions of those who, because of lack of ability or knowledge, or because of inborn dishonesty, jeopardize the patient himself and reflect on the honest and skillful portion of the profession. We who represent the patients, therefore, ask your cooperation and your earnest solicitude to the end that when we are the victims of error, it shall be at least an *honest error*.

The Community's Obligation for the Care of Its Indigent Sick and Injured¹

BY FRED. S. BUNN,

Superintendent of the Youngstown (Ohio) Hospital.

On the front cover of the latest report of the Boston Dispensary appear these two terse epigrams: "The cure of disease is a public necessity," "The prevention of disease is a public economy."

We believe anyone sufficiently interested to give the matter of public health serious thought will accept these statements at their face value. While we fully accept them as equally true, it is our purpose in this paper to deal particularly with the first one.

In all civilized countries it is a recognized function of the family to care for its sick and injured. When families unite to form a community for their mutual protection and benefit, the care of dependents is none the less an obligation, even though it may not be so readily accepted. In fact, the obligation is greater, for, as communities grow in size and living conditions become more

¹ Read at the meeting of the Ohio Hospital Association, Cincinnati, May 24-26, 1916.

complex, life is fraught with greater dangers. In few cases where one is afflicted with disease is the fault entirely his own. If he contracts typhoid fever, it is because of contamination of the community's water or food supply. If he suffers injury while at work or on the street, it is frequently due to another's disregard of established rules. If he is afflicted with one of the many so-called contagious diseases, it is due more often to the ignorance or viciousness of one already afflicted than to his own carelessness or neglect. If, then, disease and accident are so often suffered through no fault of the one afflicted, why should he be, as under our present system he is, compelled to bear the entire penalty? The injustice of this is not so evident where one's income is sufficiently large to withstand the drain of both lost time and the expense incident to accident or illness, for his problem does not necessarily intrude itself on our attention. But in that large class of cases where income is sufficient to secure only the bare necessities of life, loss of time and unusual expense bring in their train such a heavy burden of suffering that every humanitarian consideration demands that the community transfer to its broad shoulders the load for which it is at least partly responsible, and assume the obligation it cannot honestly refuse. "There is that withholdeth more than is meet, but it tendeth to poverty. There is that scattereth and yet increaseth." The investment a community makes in the health of its people is one of the wisest and most profitable it can make, for every member restored and thus enabled to become again a producing factor will repay yearly to the community's wealth many times the initial outlay.

The state, by enacting laws imposing on itself an obligation to assume the whole expense and care of certain classes of dependents, has thereby established as a principle the community's obligation to provide such care. It has further emphasized this principle by granting statutory authority for the establishment of county or municipal institutions for the care of all classes of sick and injured, and it has given permission to counties and municipalities to contract with private hospitals for such care.¹

We are convinced that Ohio has been wise in withholding "state aid" from general hospitals, and in seeking rather to place the responsibility for the care of the indigent sick and injured on its counties or cities. By county or city control there is secured a more direct supervision of the expenditure of public funds, and a more definite responsibility for the hospital's product. This method has the added advantage of placing a premium on the adoption by each locality of preventive measures for safeguarding the health of its people, the resulting economies being more readily apparent in the smaller units.

Ideally, the care of such patients should be given in a hospital owned and operated by the city; particularly is this true in the very large cities, but in the smaller cities this can be efficiently and economically done by the municipality contracting with a private hospital for the care of its patients.

We recognize that quite generally there is an attitude of suspicion on the part of the public toward the payment of money derived from taxation to a privately owned hospital, but we believe that this attitude is largely due to the manner in which the public has been educated. The following is fairly representative of the way the public has been led into a position where it looks on the payment of "city money" as a subsidy to the hospital when

the exact reverse is the true situation; in every case where a city or county fails to meet the whole cost of the care of its sick poor, the hospital is subsidizing the community.

The first hospital in a community is usually the result of private initiative and philanthropy; during the first few years, while the community is becoming educated to the advantages of institutional care, it is comparatively easy to secure sufficient funds from private sources to give care to such citizens as are unable to secure adequate medical attention for themselves; but, as the hospital grows, and its free work increases in volume, the constantly recurring "annual deficit" becomes more and more difficult to finance. It is at this point in the hospital's development that the idea is conceived of asking the city to come to the rescue of suffering humanity by making "an annual contribution to aid the hospital in its work of mercy." City officials usually respond to such efforts; but, unless the matter is kept constantly before the council and sufficient public sentiment maintained to stimulate the council, the appropriations fail to keep pace with the constantly increasing demands, and at times altogether fail to find a place in the budget. These recessions of public interest not only lay added burdens on the loyal few who have supported the hospital's work, but also seriously retard the institution's progress. The point we wish to make is that, even though the process may be slower, a more stable support can be secured by educating a community up to a true sense of its responsibility than by allowing it to discharge only part of its obligation, and remain complacent in the misconception that it is generous in contributing to a worthy cause. When a city refuses to make proper medical provision for those of its wards who are sick, and leaves the problem of their care to private charity, it is like an inhuman father who says to his sick child, "Son, I am under very heavy expense just now, and we have good neighbors who will not see you suffer; so get out and come back when you are well again."

A troublesome question which often arises in connection with municipal appropriations for a private hospital is the one of city representation in the hospital's management. There is really no more reason for the city being represented on the hospital board of trustees than there is for it being represented on the board of the corporation that sells it fire equipment. The hospital has for sale a service the city must buy. A better grade of service can undoubtedly be secured by the council assuming a judicial position as to the fulfillment of its contract than it can by assuming a part of the responsibility through representation on the board. From the hospital's standpoint such representation would interfere with a consistent constructive policy, because of the necessarily frequent changes in personnel incident to the insecure tenure of political office.

Whenever in any city privately owned hospitals provide sufficient facilities for the care of all patients, a municipal contract with such institutions is to the advantage of both city and hospital. It secures that happy combination of private initiative and public scrutiny which assures a high grade of service for the patients. It prevents duplication of buildings by utilizing those already donated for the purpose, thereby saving the community thousands of dollars annually in interest on the capital necessary to erect adequate buildings for the city's exclusive use, while it aids the hospitals in keeping their per capita cost to a minimum, as it simply means dividing the overhead charges by a larger number, as well as fur-

¹See revised statutes of Ohio.

nishing valuable clinical material. These advantages to the hospitals enable them to make a rate for city patients which will cover actual cost of service, exclusive of investment charges.

The experience of the Youngstown hospitals with this problem may be of interest to the members of this association. Youngstown, a city of 100,000 people, has two hospitals—the St. Elizabeth, a Catholic institution, and the Youngstown Hospital, which we have the honor to represent. The combined capacity of the two is 400 beds, which, up to the present, have been sufficient for the care of all proper applicants for admission, either city or private. From 1898 until January, 1916, the city appropriated a fixed sum for hospital purposes, their contract with the hospitals requiring that they accept all cases certified and accept as full compensation therefor the amount the city officials saw fit to appropriate, with the result that in ten years the hospitals lost on this work alone more than \$100,000. About two years ago the hospitals arrived at a point where it seemed impossible to finance their work because of increasing yearly losses. They agreed to attack the problem jointly, and undertook a campaign to inform the public of the true situation. The whole matter was put frankly up to the community without reservation of any kind. The papers of the city heartily indorsed the hospital's position and gave the matter a conspicuous place, both papers commenting favorably on it in their editorials. In fact, without their loyal support the attempt would have been hopeless. Representatives of both hospitals were given opportunity to speak before various organizations. A number of the ministers brought the subject to the attention of their congregations. The result of it all was that sufficient public sentiment was aroused to prompt the council to enact the ordinance under which we are now working. We were fortunate in having an administration broad minded and public spirited enough to read aright the public mind.

Briefly, the ordinance provides that the city pay to the hospitals \$1.75 per day for each day's service rendered to patients worthy of receiving such care when certified by an agency appointed by the council. At present these certificates are issued by the board of health after investigation by a member of the sanitary police force of any case recommended by a physician or other interested party. While this arrangement has not been in operation a sufficient length of time to justify us in presenting it as a solution of the difficult problems which arise in adjusting the relation of the community to the hospital, so far it has worked very satisfactorily to both city and hospitals.

Now, we have tried to show that the community is responsible for the care of its indigent sick, that ideally this should be done in a municipally owned and controlled hospital, but that it can be economically and efficiently done by a contract between a municipality and a private hospital; that objections to this method are largely due to faulty education; that better service can be secured without city representation in the management of a private hospital; and that such a method is both practical and economical, and works to the advantage of both community and hospital.

The hospital association of the Missouri, Kansas & Texas Railway Company is considering various cities of Texas with the view of selecting a location for a \$250,000 hospital, which it is planned to build in the near future. More than 7,000 employees of the road live in Texas. T. A. Murphy, of Denison, is president of the hospital association.

NEW YORK LAUNCHES NEW FLOATING HOSPITAL

The "Helen C. Juilliard," Named For Its Donor, Is Put Into Service By St. John's Guild

St. John's Guild, New York city, has recently put into service its new floating hospital for children, the Helen C. Juilliard, built and equipped at a cost of \$125,000, and said to be a model of its kind. The new boat, which is the third of similar design to be operated by the guild, has a legal carrying capacity of 2,400, but it is proposed to limit the number of patients to 1,200 in order to give the best quality of service. The hospital arrangement provides four wards, an operating room, an irrigation room, a sterilizing plant, and a small mortuary. An emergency ward, with three beds for mothers of the sick children, is a feature.

A convenience for mothers whose babies are not sick enough to go into the wards has been installed in the form of wire frames on the backs of the long benches on one of the decks, with small hammocks suspended.

The boat is lighted by electricity, and has a steam heating plant which will permit of its use in winter as well as summer. There are bath rooms for both mothers and children, with arrangements for fresh water or sea water, hot or cold, or for regulated temperature for medicated baths.

The hospital staff will include a superintendent, eight nurses, a physician, matron, and housekeeper, in addition to the necessary domestic assistants.

Mrs. Juilliard, donor of the new hospital boat, which is the second she has built for the guild, died on April 2 of this year.

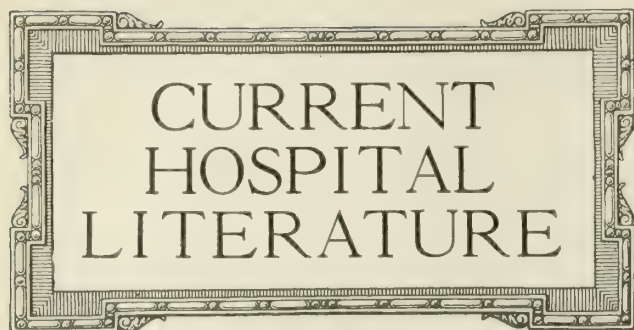
SANE PERSONS IN INSANE HOSPITALS

Georgia Institution Reports 105 People Were Illegally Committed Last Year—Law at Fault

The State Board of Health of Georgia has just recorded the fact, in a report, that 105 perfectly sane persons were confined at the insane hospital at Milledgeville during the year 1915, committed there by due process of law. All these persons had trial by jury, and it is said that in not one single case was it shown that any illegal attempt or unfair purpose was behind their commitment, but that the law itself was at fault, which provides that only lunatics, idiots, epileptics, and demented inebriates are to be committed and confined. It is in the last class where the trouble lies, the officers of the law presumably insisting that inebriates are all demented. The report of the Milledgeville institution states that it is the friends or relatives of this class of irresponsibles who are responsible for their commitment, and that those relatives and friends reason that any man who becomes inebriated must also be demented and ought to be confined.

The Atlanta *Constitution* is heading a move to define more clearly just what classes of patients may be committed to the state hospitals, and to see that sufferers from any disease who pass through legal channels are distributed to places where their diseases can be properly recognized and taken care of, and where they will be considered as sick people and not as criminals or demented.

Dr. P. M. Kelley, who recently resigned the superintendency of the Kankakee State Hospital, Kankakee, Ill., after being at the head of the institution for a number of years, died of Bright's disease at Colorado Springs May 31.



ALBERT ALLEMANN, M. D., Foreign Literature,
Army Medical Museum and Library, Office of the Surgeon-General,
United States Army.

The War's Effect on the Special Hospital. Ed. of the Hospital, 1916, LIX, No. 1554.

The resources of all hospitals have been heavily taxed on account of the advanced prices in drugs during the present war, but more especially have those institutions been affected that care for epileptics and ophthalmic cases. The National Hospital for the Paralyzed and Epileptics uses annually one and one-half tons of bromides, and, assuming the entire amount to be in a potassium salt, at the present market value the increase would be nearly seventeen times the prewar price. All ophthalmic hospitals have suffered from the shortage of atropin and eserine, which are now worth more than their weight in gold.

Dietotherapy. E. Grace McCullough. *The Trained Nurse*, 1916, LVI, No. 6.

The earliest diet table in the world was very short—"of every tree in the garden thou mayest freely eat, except—." There have been many distinct changes during the past ten years. One diet has passed out, giving place to another, and it in turn has been replaced. Diet lists and grouped diets are gradually being eliminated from ward bulletins. The old beef broth, beef tea, beef regime has been abolished, and the hospital which formerly issued gallons serves pints. The daily per capita quantity of milk has dropped 50 percent. Calories are estimated up or down to the normal weight for the measurements of the patient. The feeding up no longer means simply extra eggs and a few glasses of milk; the feeding down, not merely a reduction in bulk, but intelligent elimination. In special or metabolism cases all feeding should be on the basis of intake and output equilibrium, with special reference to the character of the disease, the more or less severity, plus complications.

Care of the Sick at Dordrecht (*Ziekenverpleging te Dordrecht*). E. Cuypers, *Archit. Ziekenhuis*, Amsterdam, 1916, VII, No. 4.

The Dordrecht Society for the Care of the Sick has recently erected a hospital in the suburbs of the city. In planning the hospital it was decided to strictly separate the buildings for the patients from the administrative offices and rooms for the nurses and servants. Of the two buildings for the patients, only one is as present finished. Between the two stands the administrative and nurses' building, which is also completed. The patients' building, connected by a covered gallery with the administration building, has three stories. On the ground floor are six sick rooms, with two beds each, one reserve room,

a bath room, and a nurses' room. The second floor has the same arrangement as the first, with the difference that the six sick rooms have only one bed each. On the third floor is one large and one small operating room, a sterilization, x-ray, and dressing room. The administration building contains on the first floor the administrative offices and a dining and recreation room for the nurses. The second floor contains the rooms for the chief nurse and eleven nurses, and the third floor contains those for the servants.

Mortality Among the Patients of the French Military Hospitals (*La mortalita dei ricoverati negli ospedali militari francesi*). *Ospedale Maggiore*, Milano, 1916, IV, No. 2.

Dr. Bertillon, director of medicosurgical statistics of the French army, has drawn up mortality statistics of the French military hospitals. Of 100 soldiers treated at the hospitals, 98 recovered and 2 died, or, more exactly, the mortality is 18 per 1,000. In the civil hospitals of Paris the mortality is six times as large—viz., 106 per 1,000. The mortality of the soldiers in September, 1914, was 45 per 1,000, in October of the same year it reached even 53 per 1,000, and then fell to 18 per 1,000. These statistics include sick and wounded soldiers.

Cleaning Aluminum Ware. Minna C. Denton, *Jour. of Home Economics*, 1915, VII, No. 6.

1. "Boiling out" with water. Hot water itself causes a darkening of aluminum, which shows plainly on heating clean water in a clean vessel even before the boiling point is reached. This "tarnish" is very troublesome to remove. (To remove the tarnish, observe No. 4, below.)

2. Boiling with soap or alkaline detergents. The action of alkali (e. g., sodium, ammonium, and potassium compounds) will ruin the vessel in time. Such neutral soap as Ivory may be used if there is grease to be removed, but aluminum vessels should be kept out of the usual soapy dishwater.

3. Rubbing with metal polishes. It is impossible to make a statement which would cover all kinds of metal polishes. I notice that aluminum manufacturers recommend the use of some of them which I have found satisfactory.

4. Cleaning by use of abrasive materials. I have found the use of steel wool No. 0 the quickest and most efficient means of removing the black tarnish. Another abrasive cleaner has a twine mesh basis, its threads being wrapped with fine copper bands. It has appeared rather recently in household furnishing stores, being originally an importation from Germany.

5. Cleaning with acids. It has been noted that when a highly acid food, as rhubarb, is cooked in an aluminum kettle, any dark coating vanishes. Authorities differ as to the harmfulness of the small amount of water-soluble aluminum salts that would thus be taken in the food. Extreme caution would suggest that such foods be cooked in porcelain-lined kettles. Experiments show that the harmless commercial acids would be very expensive when used in quantities sufficient for satisfactory results.

German Hospital Trains (*Deutsche Lazarettzüge*). Dr. P. Martell. *Wiener klin. Rundschau*, 1915, XXIX, No. 45.

A German hospital train is composed of thirty-nine cars. Twenty-four of them are hospital cars, each containing 12 beds. There is, besides, a hospital car for

wounded officers, with 8 beds. A train has thus room for 296 patients in all. There is also a car for the surgeon-in-chief, containing also the dressing room, a car for the surgeons, an administrative and drug car, two cars for the men of the hospital corps, two kitchen cars, three storage cars, three cars containing heating apparatus, and a baggage car. The iron bedsteads of the hospital cars are attached in two rows, one above the other, to the sides of the car and rest on steel springs. The personnel of a hospital train consists of a surgeon-in-chief, three surgeons or assistant surgeons, a field hospital inspector, sixteen noncommissioned officers, and sixteen men of the hospital corps. The railroad furnishes the necessary officials and men for the service of the train.

Hospital Liability. Ed. Cal. State Jour. of Med.

The liability of a hospital for the negligent or careless acts of its employees or staff depends on the character of the hospital. All state institutions—hospitals, asylums, and the like—are expressly without liability for torts due to the negligence or lack of skill or judgment of their employees, and the rule holds as to strictly county or city and county institutions. Nor is there liability in such institutions for insufficient or poor food. Private hospitals are of two sorts: charitable institutions and those for gain. Railroad hospitals, though not for gain, are held not to be charitable institutions. The courts in the various states are not absolutely agreed as to the nonliability of charity hospitals, but the great weight of opinion is that they are not to be held in damages for the negligence of their employees or staff, and in this state that is the rule. The argument is that such hospitals are supported by funds given for charity, and that such gifts may not be diverted from that purpose for the payment of damages to individuals who may suffer from negligence, etc. With hospitals for gain or profit, however, the rule is quite otherwise; they are liable for the torts or wrongs of their employees due to negligence, carelessness, lack of skill, and the like. The trend of all recent decisions is that such hospitals, even though they may have exercised due care in the hiring of servants, are responsible for the negligent acts of such servants. Thus a hospital was held in damages for the death of a typhoid patient who jumped from the open window in the absence of the nurse from the room for a brief space; another was held for the burning of the patient by a hot-water bag placed in the bed by the nurse; and another for mistakenly giving the patient a solution of bichlorid of mercury. But it must be well proved that the act complained of was the act that caused the wrong. Such is the general status of hospitals in their legal relationship to the public, and it seems reasonable.

The War Hospitals of Vienna (Die Wiener Kriegsspitaler). Wiener klin. Rundschau, 1915, XXIX, No. 39.

At the outbreak of the war a hospital of 1,300 beds was at once established, but this proved far from meeting the demands. There was almost from the beginning a lack of hospitals for soldiers with infectious diseases. It was decided to build two large hospitals, with 2,500 beds each, for infectious diseases. These two hospitals were erected in the suburbs of Vienna at an expense of 10,000,000 crowns (\$2,100,000). As these hospitals were especially erected with a view to the highly virulent infections (smallpox, typhus fever, cholera, yellow fever, plague, etc.), it was necessary to reduce as far as possible the danger of infection in the hospitals and to pre-

vent the diseases from being carried from the hospital among the people. For this purpose the whole hospital is divided into a "clean" (rein) and an infected (unrein) division. At the same time the rooms of the service personnel are strictly separated from those of the patients. On one side is the group of "clean" buildings proper, and in the middle a group of buildings in which the division into a "clean" and an infected portion is strictly carried out. There are two large halls for receiving patients—one for those who can get about and one for the seriously sick and wounded. The patients are thoroughly cleaned from head to foot before they enter the hospital proper, and the clothing is put into a bag, sealed, and sterilized by steam disinfection.

What Is Meant by Hospital Efficiency, and Some of the Factors Which Are Often Responsible for Lack of Efficiency. Dr. Winford H. Smith, Johns Hopkins Hospital, Baltimore. Jour. Am. Med. Assn.

Those who have discussed this subject have measured hospital efficiency in many different ways. The per capita cost really tells nothing, except as applied to a particular institution under consideration. The patient is the prime consideration. The primary purpose of the hospital is to treat and care for the patient, and the end result should be all that modern skill and knowledge, supplemented by the necessary facilities, can accomplish at the hands of the carefully selected individuals composing the organization. The organization is the power that produces the results. Hospital efficiency means thoroughness, with sympathetic consideration and uniform kindness. It means the courteous reception of the patient, with due consideration to his claims to charity; prompt, skillful medical and surgical attention, careful and skillful nursing; a thorough study, not only of the symptoms and findings, but also of the bearing, which means accurate and complete records; a discharge of the patient at the proper time, with a full knowledge as to his ability to carry out instructions for continued convalescence, and the machinery with which to make proper arrangements when necessary; and throughout the whole course of hospital procedure a careful attention to business detail, economy of time, effort, and materials, at the same time avoiding any tendency to look on the patient as a mere case or number. Some of the factors which are commonly responsible for efficiency are, first, a lack of funds; second, in large cities, hospitals are located with too little consideration of the needs of the section selected, with the result that some sections have more hospitals than are needed, while other large sections are absolutely without hospital provision; third, organization, first and last, is one of the most important factors. The board of trustees is the governing body and the final authority, and should therefore be chosen with the greatest care. The staff organization is no mean factor in hospital efficiency. No member of the staff should be eligible to the office of trustee. Appointments to the staff should be made only on merit. The superintendent should have the authority as well as the responsibility, and should at all times have the support of the trustees and of the staff.

The National Free Tubercular Sanatorium Association, recently incorporated with a capital stock of \$100,000, proposes to establish a charitable sanatorium at Alamogordo, N. M. In addition to caring for persons suffering from tuberculosis who are not able to pay for treatment, the association expects to do considerable research work. The articles of incorporation were signed by L. L. Powell, of Oklahoma, formerly of San Angelo, Tex.; George H. Healy, of Beaver, Okla.; and Dean Sherry, of Alamogordo.

INDEX OF HOSPITAL AND SANATORIUM LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature,
Army Medical Museum and Library, Office of the Surgeon-General,
United States Army.

- Ackerman, M.** Some Notes and Conclusions on Work at the Beau Rivage Hospital, Cannes. *South African Med. Record*, Cape Town, 1915, XIII, No. 24.
- Arzt, L.** The Bacteriological Train Laboratory of the Austrian Red Cross (Das bakteriologische Eisenbahn laboratorium der oesterreichischen Gesellschaft vom Roten Kreuz). *Wein. klin. Wchnschr.*, 1915, XXVIII, p. 1335.
- Baker, F.** The Business of a Modern Hospital. *Trained Nurse and Hosp. Rev.*, New York, 1916, LVI, No. 5.
- Barthelemy.** The Work of the Field Hospitals at the Front (Le fonctionnement des amoulanes dans les services de l'avant). *Paris médical*, 1915-16, XVII, p. 487.
- Berkowitz, J. H.** Free Municipal Clinics for School Children. 16 pp., 8vo., New York, 1916.
- Bosscha, H. P.** Management of Municipal Hospitals (De leiding der gemeentelijke ziekenhuizen). *Ziekenhuis*, Amsterdam, 1916, VII, No. 3.
- Codman, E. A., and Mayo, W. J.** Report of Committee on Hospital Standardization. *Surg., Gynecol. and Obst.*, Chicago, 1916, XXII, No. 1.
- Crile, G. W.** The Unit Plan of Organization of the Medical Reserve Corps of the United States Army for Service in Base Hospitals. *Surg., Gynecol. and Obst.*, Chicago, 1916, XXII, No. 1.
- Cuyper, E.** Care of the Sick at Dortrecht (Ziekenverpleging te Dortrecht). *Ziekenhuis*, Amsterdam, 1916, VII, No. 4.
- Haberling, W.** Dressing Stations and Field Hospitals in Ancient Times (Verbandplätze und Kriegslazarette im Altertum). *Deutsche med. Wchnschr.*, Leipzig, 1915, XLI, pp. 1576-78.
- Holm, H.** The Christiania Municipal Hospital for Mental Diseases at Dikemark, Asker (Kristiania kommunale sindsykeasyl paa Dikemark, Asker). *Tidsskrift f. d. norske Laegefor.*, Kristiania, 1916, XXXVI, No. 7.
- Hubbard, C. L.** The Ventilation Handbook and Principles and Practice of Ventilation as Applied to Furnace Heating. 218 pp., 8vo., New York, 1916.
- Karltru, A.** The Need of Operation Cars for Hospital Trains (Ueber die Notwendigkeit von Operationswagen für Spitalzüge). *Wien. klin. Wchnschr.*, 1916, XXVIII, p. 1430.
- Kirsch.** Making a simple Emergency Bedstead (Ueber die Herstellung einer einfachen Behelfsbettstelle). *München med. Wchnschr.*, 1915, LXII, p. 1551.
- Mabon, W.** The Present Standard of the Care and Treatment in State Hospitals. *Albany Med. Annals*, 1916, XXXVII, No. 6.
- Martell, P.** German Hospital Trains (Deutsche Lazarettzüge). *Wien. klin. Rundschau*, 1915, XXIX, No. 45.
- Sewall, H.** Another View of Ventilation. *Interstate Med. Jour.*, St. Louis, 1916, XXIII, No. 1.
- Rasser, O.** Central Hospital Ventilation and Renewal of Air by Suction (Zentrale Krankenhausbelüftung und Luftabsaugung). *Heilanstalt*, Leipzig, 1916, XI, No. 7.
- Winge, P.** The Requirements of the Law for the Authorization of Hospitals for Mental Diseases and Their Management (Om lovens fordring paa autorisation af sindssygeasylerne og deres bestyrere). *Tidsskrift f. d. norske Laegefor.*, Kristiania, 1916, XXXVI, No. 8.
- Wortman, J. L.** Economy in Hospital Construction (Bezuiniging op den bouw van ziekenhuizen). *Ziekenhuis*, Amsterdam, 1916, VII, No. 3.

Miscellaneous

- Federation of the Charitable Institutions of Milan** (Per una federazione delle istituzioni d'assistenza e beneficenza in Milano). *Ospedale Maggiore*, Milano, 1916, IV, No. 2.
- Heating of Hospitals** (Verwarming van ziekenhuizen). *Ziekenhuis*, Amsterdam, 1916, VII, No. 4.
- Hospitalization of Sick Prisoners of War** (Hospitalisierung kurbedürftiger Kriegsgefangener). *Der Bund*, Bern, 1916, May 4.
- Liability of Hospitals for Injuries** (Die Haftpflicht des Krankenhauses). *Heilanstalt*, Leipzig, 1916, XI, No. 7.
- Mortality Among the Patients of the French Military Hospitals** (La mortalita dei ricoverati negli ospedali militari francesi). *Ospedale Maggiore*, Milano, 1916, IV, No. 2.
- The Fiftieth Anniversary of the State Hospital for the Insane at Eberswalde** (Zum 50-Jährigen Bestehen der Landesirrenanstalt, Eberswalde). *Psychiat-neurol. Wchnschr.*, Halle a. S., 1915-16, XVII, No. 37.
- The Hospital for Tropical Diseases of the Calcutta School of Tropical Medicine.** *Indian Med. Gazette*, Calcutta, 1916, LI, No. i.
- The War Hospitals of Vienna** (Die Wiener Kriegsspitäler). *Wiener klin. Rundschau*, 1915, XXIX, No. 39.
- War Hospital, The Conversion of an Asylum into a.** Lieutenant-Colonel D. G. Thompson, *The Jour. of Mental Science*, 1916, LXII, No. 256.
- Year Book of Open-air Schools and Children's Sanatoria.** A companion volume to "The Tuberculosis Year Book and Sanatoria Annual." Edited by T. N. Kelynack, 4to, London, J. Bale Sons & Danielsson, 1915.

TO STUDY HEALTH INSURANCE

Massachusetts Legislature Appoints Commission—California Already Is at Work—New York and New Jersey Active

In response to public interest in health insurance, the Massachusetts Legislature has created a commission to study social insurance, with special reference to sickness. The state department of health and the bureau of statistics are directed to cooperate with the commission of nine members, which will prepare a report and recommend the form of legislation to be introduced in January, 1917. California has a similar state commission already at work on this problem, which is attracting wide attention since the introduction this year of bills for health insurance in Massachusetts, New York, and New Jersey. Proponents of this legislation believe it will bring about a movement for "health first" comparable to the "safety first" campaign which followed workmen's compensation for accidents.

The supervisors of Nassau County, New York, are considering sites for a county hospital, for the establishment of which a fund of \$100,000 was appropriated in 1914.

DEPARTMENT OF NURSING

Conducted by MISS ANNIE W. GOODRICH,
Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

Report of the Proceedings of the National Organization for Public Health Nursing at the New Orleans Convention

BY ELLA PHILLIPS CRANDALL, R. N.,
Executive Secretary.

The fourth annual convention of the National Organization for Public Health Nursing, recently held in New Orleans, was marked by a record attendance, its notable members, and by a splendid enthusiasm. The program gave formal hearings to public health nursing under government control, organization and administration of public health nursing, medical social service, tuberculosis and mental hygiene nursing, and public health nursing education. The first was presented to a large evening audience, and furnished papers of permanent and far-reaching value on public health nursing under municipal, county, and state control. They represented Jacksonville, Fla.; Los Angeles, Cal.; Baxter county and San Antonio, Texas; and the State Department of Health of Ohio. Almost as a corollary to this general subject was that of health insurance with nursing care, by Miss Olga S. Halsey, of the American Association for Labor Legislation. These papers not only gave proof of what can be done, but clearly pointed out how great is bound to be the extension of public health nursing in the near future under pressure of public demand.

The most important in its immediate effect was the session on public health nursing education, to which were added two papers in a joint session with the National League of Nursing Education. These resulted in a unanimous vote of the League to take steps at once toward the introduction of a very modest introductory course into qualified schools of nursing. About half of the course is to be required of all students and the other half elective for seniors. The joint program on mental hygiene has doubtless been presented to the readers of THE MODERN HOSPITAL. In the report of the league it marked a significant step forward, especially in the education of all nurses in mental nursing.

In addition to the formal sessions, there were eighteen round tables, representing all other sections of the organization, such as records and statistics, visiting nursing, school, infant welfare, prevention of blindness, and industrial nursing, together with various others on rural visiting nursing, technique, and publications. While the program meetings, with their enlightening and stimulating papers from experts from all parts of the country, enlarged the vision of all in attendance, and gave them a new sense of the great opportunity in public health nursing, the most definite suggestions for their own particular problems

came from the free give-and-take of round table discussion, where practically no papers were read. Almost every round table session felt that one such meeting for their group was not nearly enough, and in each instance a second one was allowed. The attendance at these group meetings varied from fifty to one hundred and fifty. It is impossible on paper to do justice to the eager, enthusiastic seeking spirit shown at these meetings.

The more important findings of the convention were: the adoption of a standard record card for general visiting nursing service, and instructions to the committee to prepare during 1916-17, in conjunction with the several standing committees, standard cards for the special forms of public health nursing, monthly and annual report forms, and a standard financial statement; the extension of visiting nursing to include hourly service wherever practicable; the ruling against relief giving as a function of any public health nursing service; and providing for relief committees to cooperate with nurses in small communities, which shall not be a part of the visiting nursing association; the recommendation of publication of a manual on the technic of visiting nursing; the inclusion of the *Public Health Nurse* quarterly with membership in the national organization; the publication of the *Bulletin* every two months instead of once a quarter; the announcement of Miss Gardner's book on organization and administration of public health nursing early in the autumn; the approval of a national charter, and biennial instead of annual meetings after 1918.

The most significant resolutions passed were: (1) that addressed to the General Federation of Women's Clubs, requesting clubs and federations—local, state and national—to earnestly consider the extension of public health nursing as their next great field of endeavor, which would be a logical sequel to their cooperation with the Federal Children's Bureau in the promotion of "Baby Week" last March; (2) the indorsement of the Jones bill, S. 5408, providing for a woman's division within the federal department of labor; (3) that favoring health insurance under state control and providing for nursing benefit; (4) that in memory of Dr. Henry Baird Favill and Dr. Theodore Sachs.

The officers of the organization for 1916-17 are: honorary president, Lillian D. Wald, New York; president, Mary Beard, Boston; first vice-president, Nan Dorsey; second vice-president, Mrs. Margaret Sirch, Los Angeles, secretary, Mary E. Lent, New York; treasurer, Samuel Sloan Colt, New York; chairman Membership Committee, Mary Magoun Brown, New York; executive secretary, Ella Phillips Crandall, New York.

The board of directors consists of S. H. Cabanis, St. Augustine, Fla.; Fannie F. Clement, Washington, D. C.; Ida N. Cannon, Boston, Mass.; Mrs. Elizabeth Davies, Seattle, Wash.; Edna L. Foley, Chicago, Ill.; Elizabeth G. Fox, Washington, D. C.; Mary Gardner, Providence, R. I.; Matilda L. Johnson, New York; Mrs. Kate Kohlsaet, Milwaukee, Wis.; Isabella H. Pirie, Los Angeles, Cal.; Rebecca Shatz, New York; Elizabeth Stringer, Brooklyn, N. Y.; Blanche Swainhardt, Cleveland, Ohio; Lena A. Warner, Knoxville, Tenn.; Martha J. Wilkinson, Hartford, Conn.

Corrective Work and Its Relation to the Nurse

BY MIRIAM TOWNSEND SWEENEY,
Director of Physical Therapeutics, Children's Hospital, Boston, Mass.

Nursing education in America has been far in advance of England, Germany, and other European countries, though to England will always be given the glory of her

Florence Nightingale and the first training school for nurses, and Germany will ever be famed for the establishment of the Deaconess order.

Since the founding of the first training schools in America in the years 1871-1873 the progress has been steady, though necessarily gradual. These schools at this early period found competition keen, and necessarily had lower standards than were desirable because the demand was greater than the supply. Responding, however, to the increasing needs of the community, nursing now ranks as an art and a profession, and the demand is for women of a broad education and keen intelligence to develop the many phases of modern nursing. This demand for a high grade of efficiency puts the competition along the right lines, and, in order to compete, the training nurse must be alive to all sides of her work. Not only must she grasp all opportunities, but she must have these opportunities available in order to be completely trained.

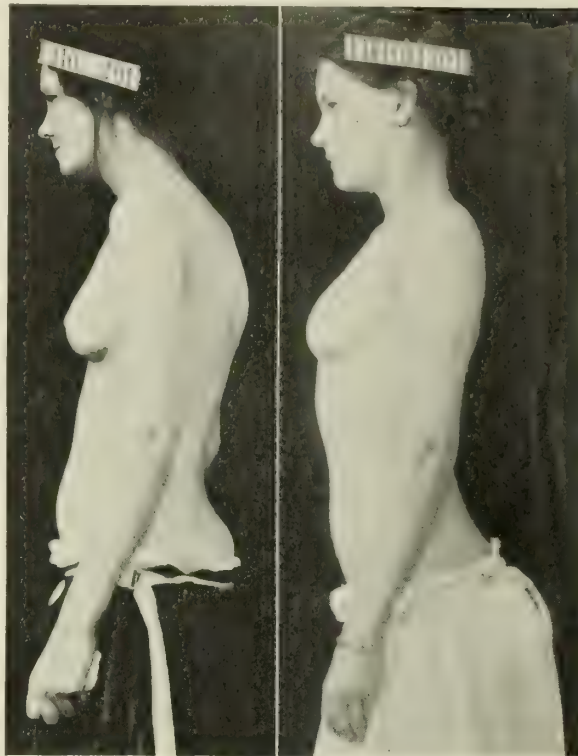
Corrective work—so called—is so little known in the field of nursing that undoubtedly a definition and description would be desirable—it is that branch of therapeutics which uses principally exercise or massage, or the two combined, for palliative or curative purposes. As a therapeutic measure, the fully trained nurse should be as familiar with corrective work as with the other methods of treating disease. It is, for example, much more a part of her work than urinalysis, blood examination, or even the giving of vaccines; yet it is undoubtedly true that few women, even those ranking high in the profession, have other than the most superficial knowledge of this important subject. Except in the larger hospitals, there is no specially trained person to do this work, and in most general hospitals the nurse will have occasion to do corrective work on medical, surgical, and orthopedic wards. Though at the present time it is a great question, to be carefully considered from every point of view, how much time may be legitimately given to special branches of nursing with their varying demands, it does seem essential that the nurse should have at least an elementary knowledge of this line of work, the results of which constantly emphasize its importance.

Take, for example, the value and extent of post-operative treatment in orthopedic and surgical conditions. In cases of infantile paralysis, a large number of which is necessarily operative, the value of correct muscle training by exercise and massage cannot be overestimated. To know the extent to which a muscle may be used without producing harmful fatigue, and to be able to apply the proper exercises, grading them according to the strength of the exercise as well as of the muscle, are technical details which probably will never be within the province of the nurse, but the proper giving of prescribed exercises and a practical knowledge of massage might well be incorporated in the curriculum of the more advanced schools.

Cases of congenital hip disease after reduction are taught to overcome the stiffness produced by long retention in plaster, by passive and later by active exercises, plus massage, which produces flexibility and improved circulation. Known cases of mild clubfoot in infants have been so definitely benefited by passive stretchings that operative measures have been abandoned and the results have been satisfactory.

Lateral curvature of the spine or scoliosis is a condition the treatment of which is largely by corrective exercises, aided by effective support. The nurse meets this type of case in private practice; for such cases the treatment is usually carried on over a long period of time, during which intelligent supervision is essential. In a number of

the larger hospitals special clinics for the treatment of this condition are a routine part of the out-patient department. The assistants in these clinics are perhaps for the most part volunteer student workers from schools of physical education in the vicinity. How much more practical and of how much greater value to the training school and to the pupil if the experience in these clinics could be added to their instruction. In such clinics they could be taught their exercise technic and put their knowledge into practical use on clinic cases. Such an arrangement would be of benefit to both the hospital and the training school.



1. 2.
Fig. 1—Girl, age 15, before beginning treatment by corrective exercises. Fig. 2—Same case seven months later, after treatment by corrective exercises.

These accompanying pictures, showing results which are wholly due to a series of well-directed corrective exercises, given for a comparatively short period of time, well illustrate the striking mental as well as physical effect of such treatment on the patient. To enumerate further types of such cases would only be to state this fact—that most orthopedic conditions are definitely benefited by such treatment carefully carried on under the direction of the surgeon. In general surgery, conditions following skin grafts over extensive burned areas, where contractures are involved, may be definitely helped by the intelligent nurse, who can follow such post-operative cases with such treatment as may be found necessary. The paralysis from disuse which results from a bad septic hand or foot can be helped in no other way. Fractures and sprains also show marked improvement under massage and passive manipulations.

Medical cases also come under this long list. Such cases as anemia, gastrointestinal disturbances, faulty nutrition in infants, and paralysis following lead poisoning respond wonderfully under properly directed exercises and regular massage. In dealing with arthritis and other joint disturbances due to toxic conditions, again massage, in combination with passive and active exercises, is of known

value. Exercises to induce coordination at certain stages of chorea are given with beneficial results, and all patients convalescing from prolonged recumbency could be assisted to lessen the period of convalescence by a correctly directed course of treatment.

We have been considering chiefly the hospital aspect of the corrective or physical therapeutic work. Now let us consider the nurse in her various fields, and discover what an important help the knowledge of this kind would prove to be.

In private nursing the place of the nurse is to assist the busy surgeon or doctor. How much more valuable her service would be if she could knowingly carry on this treatment, which usually requires the services of another person. This person may be a masseuse, or one who has had a broader training along therapeutic lines. This entails added expense to the patient, and it is oftentimes because of this expense not possible; therefore, owing to the lack of knowledge on the part of the nurse, such treatment is abandoned or the case is turned over to the physical therapist. It amounts almost to humiliation for a nurse to be obliged to admit any such lack of knowledge in the technicalities of her profession, and yet is not this corrective work as much a branch of her work as the giving of medicines or the relief of pain? Should she not know what exercises would relieve back strain, or how to massage and exercise patients who suffer from chronic constipation, etc.?

Also, we have the problem of the overconfident nurse, who, in order not to display her ignorance when told to do these things, attempts treatment without proper understanding. In this instance the results may be disastrous. Such exercises as are used are given in definite progression, and a knowledge of this progression, and the reason for it, is too important to be disregarded. It is therefore because of such complications as might arise from the wrong application of exercises and massage that a plea for instruction along these lines is here made.

At the present time the nurse is an important social factor in the community. She is identified with almost every branch of public health work, and due to her previous training and experience, is able to cope intelligently with the many problems which daily confront her. Take, for example, a graduate doing district nursing. If this nurse has had during her three years' training a legitimate time allotted for the study of the treatment of disease by physical therapeutics, she will be able, not only to carry on the treatment, if it be simple, under supervision, but from her observations and teaching will be able to recognize conditions which require the care of the orthopedic surgeon or the treatment of a recognized physical therapist.

In school nursing we have perhaps the most striking need for the nurse who is fully trained and is familiar with the initial conditions which evidence themselves in the school child. The growing child who wears constantly a faulty waist—that is, one which has most of the clothes and garters pulling and suspended from it, will, because of misdirected and wrongly distributed weight, slump into a poor standing and sitting position, and thereby acquire conditions ranging in severity from the not unusual "faulty posture" to the deforming condition—lateral curvature of the spine. This question of proper clothing is an important factor. The school nurse should be able to direct a change and meet the perhaps already established conditions; but she must first be able to recognize these conditions. To a greater or less degree the nurse in any kind of public health work would be thus able to help, and

in many instances, prevent, conditions which otherwise might terminate seriously if not checked at the beginning.

It is not intended to convey the impression by this brief article that the nurse will be able to replace the physical therapist, or vice versa. From the nurse is expected a practical and theoretical knowledge of all the branches of nursing work, which makes her the "trained woman." In the treatment of nephritis, for instance, she must be able to prepare a diet which will meet with the caloric needs of the patient, and yet be a diet which will be low in protein and the food elements which are most harmful, thereby saving the demand on the affected part of the system. To do this it is not necessary for her to be a trained dietitian. So, in this corrective work it is not necessary for her to be a physical therapist; but physical therapeutics should be incorporated in her training in a limited way, so that she will have a basic knowledge of it, thereby strengthening her foundation of general nursing principles and making the training broader and more inclusive.

Department of Nursing and Social Service of the Washington University of St. Louis

BY JULIAN C. STIMSON, R. N.,

Head of the Department of Nursing and Social Service, Washington University, St. Louis.

For some years a training school for nurses has been conducted by the medical department of Washington University. Members of the faculty of the medical school have composed the advisory committee of the training school, and have made themselves responsible for the education of the nurses. In the spring of 1914 members of this committee of doctors urged a combination of the training school for nurses and the social service department under the title "Department of Nursing and Social Service of Washington University." The social service activities had up to this time been under the direction of the same group of doctors who had composed the training school committee. The headworker of the social service department has been employed by the university on the recommendation of the medical school authorities, who had agreed that her time might be divided between the hospital for adults, in which the Washington University medical school was responsible for patients, and the hospital for children, in which also the medical and surgical service was in the hands of the Washington University medical school. This last hospital, the St. Louis Children's Hospital, agreed to the arrangement, and paid half of the headworker's salary. The nursing in both hospitals was done by the nurses of the Washington University training school. Since the nursing in both hospitals and the social service in both hospitals was under the direction of the heads of the departments of the medical school, and through them under the university, it seemed that a combination of the nursing and social service under one head would work out to the advantage of each branch.

In April of 1914 a vacancy in the position of superintendent of nurses made it appear that this combination under one head could then be made. The headworker of the social service department, who had previously had experience as a superintendent of nurses, was therefore made head of the department of nursing and social service. Then, with unusually efficient assistants in both offices, the details of the amalgamation began slowly to be evolved, and the development of the department progressed steadily.

The situation in April, 1916, after two years of the experiment, is that the university is fully responsible for the

policies of the training school. This responsibility is indirect, because the university delegates its responsibility to the medical school, but the cooperation between those two bodies is so great that it amounts to universal affiliation. In the same way the university is responsible for the education of the nurses, and presents diplomas of graduation to those nurses who are recommended by the medical school. For over a year the requirement for admission to the training school has been graduation from a high school. In a few months it will be graduation from an accredited high school, with presentation of sufficient credits to admit to the college proper. Regular instruction to the nurses is given in carefully outlined and correlated courses by members of the faculty of the medical school, who take these duties with as much seriousness as they do their duties to the medical students. A member of the faculty of the English department of the university is detailed to conduct courses in English for the nurses.

In December, 1914, all the patients and equipment were transferred from the old to the new hospital buildings. These separate institutions are now housed in a very remarkable group of buildings, covering more than a city block and situated ideally on the edge of a very large park. The buildings are all of the same style of architecture, and are constructed of the same material, so that the group presents the appearance of being one large institution instead of three institutions. The Barnes Hospital, the St. Louis Children's Hospital, and the Washington University medical school, with the dispensary under its control, are all under separate and individual management. A very remarkable scheme of cooperation has been worked out which, while presenting many problems, is working for economy and efficiency. There is a central heating and lighting plant under the ownership of the university. The two hospitals buy their heat and light from the central plant. A single kitchen supplies the food for both hospitals and for all the nurses and doctors employed in the separate institutions. The medical school is responsible for all branches of the medical service in all of the departments, and the nursing and social service for both hospitals and the dispensary is in the hands of the department of nursing and social service, which is under the direct control of the medical school and thus of the university. A new nurses' home, which houses about half of the nurses, was built by the university, and the other half are living in a building which is owned by the Barnes Hospital. The latter is called the service building, in which are located the kitchen and dining rooms. All affiliating pupils, post-graduates, probationers, and some of the junior nurses have rooms in this building, but after they become permanent members of the training school they are moved over into the nurses' home. The new home is a modern, six-story, fireproof building, with single rooms for every nurse. Each one is provided with a large wardrobe and running water. On the first floor are reception rooms and one which can be used for classes and dancing. Each floor above the first is provided with a trunk room and a small kitchen. The latter are equipped with stationary laundry tubs, gas stoves, and ample cupboard room. The shelves are used for the dishes and supplies furnished by the training school for community use, and sections of cupboards are given to groups of students for individual use.

Nurses who enter the Washington University training school do not have to go anywhere else for affiliating courses in order to obtain experience in any department required by the state for registration. In the Barnes Hospital they have adult male and female medical and

surgical service, including many neurological patients, and also excellent obstetrical and gynecological and operating room experience. All major operative work for the Children's Hospital is done in the operating rooms of the Barnes Hospital. The patients are brought to the surgical pavilion through a tunnel which connects the two buildings. In the Barnes Hospital nurses also have experience in practical dietetics, which includes not only all special diets for both children's and adult's wards, but also those served to the private patients. A special wing of the Barnes Hospital is reserved for private patients, and all nurses have a part of their training in that wing. The patients here may belong to any service. The ward service is with both white and colored patients, but the colored patients are in a separate department.

All the nurses have a minimum of four months' service in the Children's Hospital, but many of them have several months more than the minimum. The four months secures a month in each of the following departments: surgical, including many orthopedic cases; medical, including private cases; infants, where there are always from twenty-five to thirty feeding cases, and usually several babies in the incubator room; and contagious, which has three floors of glass-partitioned rooms, often containing many cases of each kind of four or five different contagious diseases, both free and private cases.

The dispensary averages over 400 cases a day, and includes all branches of service, with such special subdivisions as separate clinics for tuberculosis, diabetes, whooping-cough, stuttering, etc. All pupil nurses have two or three months in the dispensary and a short period in the social service department. As probationers most of them have two weeks with the social workers. This period is meant to familiarize them with the objects of the department and to give them an idea of the kind of homes from which patients come, and the conditions under which they live. In their senior year, as a part of their obstetrical training, the students have a period of visiting nursing under the social service department. All the patients who are delivered by the dispensary out-patient obstetrical department are visited for ten days by a nurse-in-training. The nurse gets her instructions from the doctors through the head nurse of the obstetrical ward of the Barnes Hospital, where for three months she has been having her training in obstetrics. She learns the patients' prenatal and social condition from the record in the social service department which has been prepared by the social worker who is the nurse for prenatal instruction, and before she completes her out-patient visiting her work is inspected by the head of the department of nursing and social service.

In addition to all the regular services there are opportunities in the hydro- and mechanotherapy and the x-ray departments, in the dental clinic, and in the office of the training school.

The instructor of nurses has at her command for the benefit of the nurses a special lecture room in the Children's Hospital, which is equipped with an excellent lantern. She also has excellent practical class rooms in the Barnes Hospital, and any of the laboratories, class rooms, or equipment of the medical school that might be of use to her in her teaching of the nurses is at her disposal. In their study of bacteriology, for instance, the student nurses use the regular laboratory of the medical school for their laboratory work, and in anatomy special demonstrations on cadavers are arranged from the medical school material. The library of the medical school is also open to the nurses, and a special appropriation for

books for the use of the nurses is granted by the library committee. Another opportunity of obtaining books is offered in the record room of the Barnes Hospital, where the librarian of records maintains a fiction and general literature library for the benefit of nurses and all the people connected with the hospital. This library is maintained as a traveling branch of the public library, and books are issued in the regular way. A volunteer social worker twice a week distributes books to patients from this library. A reference library for the use of nurses in connection with their class work is conducted from the training school office. A recent study of how much this small library was being used revealed the fact that in three months 700 issues were made of less than 105 volumes. These books cannot be kept out for more than twenty-four hours.

The problem of a fair proportionment of the expenses of the training school and the cost of nursing service to each institution has not as yet been completely worked out. The first year in the new buildings, with the complicated cooperative system, has been used more or less as an experimental one, from which actual expenses and actual costs could be learned. The arrangement between the three institutions has been that no institution is to profit from any service it renders any other, but the cost of each commodity rendered is to be divided on a pro rata basis. All bills for the food, laundry, rooms, equipment, etc., that have been supplied to the nurses by the Barnes Hospital will be paid by the university, and also all care of sick nurses, whether rendered by the Barnes Hospital or in contagious conditions, by the Children's Hospital. The salaries of such officials of the training school whose services are for the whole school, such as those of the superintendent of nurses, the instructor, the second and third assistants, the instructor of dietetics and the instructor of massage, and the stenographer of the training school office, are paid by the university, which also pays office expenses. The university built the new nurses' home with the understanding that the Barnes and Children's hospitals would pay 5 percent interest on the investment, which is being charged in the form of rent per room. This rent (about \$8 a room) has been calculated from the interest on the investment in the building and equipment, and from the current expenses.

After accepting and paying all the bills that belong to the training school proper, the university is in turn rendering bills to the Barnes and the Children's Hospital and to the dispensary for actual nursing service supplied by the training school. The cost of administration and instruction, including office expenses and the expenses of graduating exercises, have been found to average \$10 per pupil nurse per month. The cost of uniform equipment has been calculated to be \$3 per month; laundry costs \$5 per month per nurse, and food has been estimated at \$15 a month, but this estimate is probably too low. The total cost of a pupil nurse to any one of the three institutions per month is then estimated to be the sum of these items, plus the room rent (\$8 if in the nurses' home, or \$5 if in the service building), making a total of either \$38 or \$41, according to where the nurse lives.

All this may seem very complicated, but an accurate day book in which is recorded the place of service of each nurse, or the place of illness and the place of living, makes a monthly statement for each institution simply a matter of careful bookkeeping. This method of accounting gives a fair apportionment of the cost of such nurses as are not rendering full service—the probationers, for

instance. No probationers are sent for duty either to the Children's Hospital or to the dispensary. They cannot be said to be giving a full day's nursing service to the Barnes Hospital, for most of their time is given to instruction; therefore the Barnes Hospital is not charged for their services, but the cost of their instruction is charged up in the account rendered for full nursing service, and any deficit at the end of the year that the university may find between the amounts received from the three institutions for nursing service and the cost of maintaining the training school will be divided between the three institutions on a pro rata basis.

The benefits of the relation between the training school and the university can easily be pointed out. Since the university exists for purely educational purposes, the emphasis in any department connected with it is on the educational side. In an attempt to meet the requirements of the freshman class of the college, standards for admission to the training school have been raised, and all the class work has been developed and outlined so that it is worthy of recognition. The instructor of nurses is a college graduate and a graduate trained nurse especially fitted for her position, and all the doctors who lecture to the nurses are members of the faculty of the medical school. All nurses who complete the three years' course and wish to continue their studies in the university may present credits from the training school, which will be taken into consideration by the university authorities and recognized, where possible, toward a university degree.

It is hoped that in the near future a fee for instruction in the training school for nurses may be charged, as fees are charged in other private educational institutions. It is also hoped that it will be possible to establish a six months' preliminary course outside of the hospital in connection with the university and the medical school. For this course the plan is that young women shall make their own arrangements for room and board, and for six months live like college students. This six months' preliminary course would shorten the later hospital training by six months.

At the present time those young women who enter training in the Washington University training school after having completed a college course are given six months' credit. It is possible to do this if such young women are entered with the fall classes, because in this way they complete the regular class work in the academic year and their credit of six months can come from the summer months of the third year without loss of class work, especially if there has been any time lost for illness that is to be made up.

The objects of combining the nursing and social service under one department are mutual helpfulness, and that correlation and concentration which are the essence of good work. It was thought that an interdependence and mutual understanding would be brought about through similar methods of technic and through aiming at similar goals, and that the result would be better equipment of nurses and social workers, and thus better service. The management of the two departments would be an impossibly difficult task if the head of the department did not have the loyal and untiring help of able assistants in both the training school and the social service department.

Probationers have a two weeks' service in the social service department, which is aimed to give them an insight into the problems of living and working conditions, which are factors in the physical troubles with which

they will later have to deal in their ward work. It also gives them an acquaintance with the methods of the department. The emphasis on social work in the training school curriculum is already attracting to the school young women who wish to take up nursing because of a desire to ultimately engage in social work of some form. Increased interest in the various forms of community and public health nursing is also noticed among the pupils in training.

Because of the very close connection that the head of the department has with the hospitals, opportunities for the staff of the social service department have been greatly increased. These opportunities have included many of the advantages of experience and instruction offered the nurses, and chances for usefulness that might not otherwise have reached the social workers. The head of the department, by virtue of her position as headworker of the social service department, holds many positions in the community on boards of management and committees engaged in matters of social and philanthropic interest, and she has therefore a unique advantage in thus being a connecting link between the community and the allied institutions which she represents. In this capacity she is constantly being called on to make addresses before all kinds of groups on the larger aspects of nursing and its relation to the community, and also on various medical and social problems.

IS THE CORONER'S OFFICE OBSOLETE?

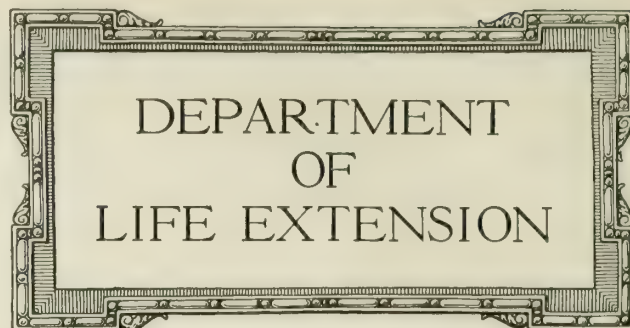
Mr. Test, of the Pennsylvania Hospital, Thinks Hospitals Best Judges as to Causes of Death

That the Philadelphia office of coroner is a relic of the past, kept alive through politics, and that it should be abolished, is the opinion of Daniel D. Test, superintendent of the Pennsylvania Hospital, as expressed in a recent address by Mr. Test to the Philadelphia County Medical Society.

In explanation of the fact that the rule for the reporting of sudden or unexpected deaths is not always observed by the Pennsylvania Hospital, Mr. Test is reported to have said: "As I interpret the law, it is the duty of the hospital to determine the cause of death. In the event there are suspicious circumstances attached, or in the event the cause of death cannot be determined, I feel it is perfectly proper to report the case to the coroner. Rarely is it necessary to do so, because in nearly every case we determine the cause of death and satisfy the health officials."

In an interview following Mr. Test's address Coroner Knight is quoted as saying that the law requires an investigation on the part of the coroner of sudden deaths, and that a quick report to him often leads to the arrest and conviction of persons implicated in the death. He believes that it would not be a good plan to leave the matter of investigation wholly in the hands of the hospital, owing to the fact that doctors are liable to be influenced by relatives of their patients and take too many things for granted. "The coroner," said Dr. Knight, "takes nothing for granted. He investigates."

The S. R. Smith Infirmary at Tompkinsville, N. Y., is hereafter to be known as the Staten Island Hospital, the name having recently been changed because of the misconstruction frequently placed on it by persons who have regarded the institution as a place for the care of the aged and infirm, when, as a matter of fact, it is equipped and operated for general hospital purposes.



Life Extension, Health, and Efficiency

BY THOMAS DARLINGTON, M. D., New York.

Coincident with the world's general progress, much has been done in recent years for relief from those conditions of environment that affect us unfavorably, for prevention of disease and physical suffering, for the promotion of longevity and happier conditions. Such work has made possible the building of the Panama Canal and many other great achievements which could not otherwise have been accomplished.

SOME FUNDAMENTAL CONSIDERATIONS

It is beginning to be understood, and soon will be generally realized, that much effort has been wasted in the past and much efficiency has been lost by lack of attention to industrial hygiene. Matters of this kind have been regarded as philanthropic, and therefore not to be considered in connection with business enterprise. As the business transactions of the world have for their object profit, any proposal is measured by finance. While the inspiration for the betterment of working conditions may have arisen from physicians and philanthropists, true economy has played a large part as the ultimate cause of sanitary reform and will continue to do so. That it pays to safeguard a workman from loss of limb or other accident by covering gears or placing guardrails about pulleys and belts is a conclusion that is obvious. Nevertheless, until recent years only little had been done. Not so obvious, but just as far-reaching in its results, is the safeguarding of employees against disease.

It is axiomatic that efficiency depends on health. It is, therefore, of great commercial importance that workmen be surrounded with proper safeguards, not only for the prevention of accidents, but also for the prevention of sickness, and that everything practicable be done, not only to prevent disease, but also to raise the standard of health to the highest point. The health of any community depends on the health of its individual components. It depends, therefore, on the persons themselves, on those responsible in various degrees for the daily life and work in a community, and on those who are responsible for the making and enforcement of laws.

So the responsibility may be divided under three heads:

1. Personal hygiene, or care by employees of themselves.
2. Care by a company within its inclosure.
3. Care by authorities (town, city, state, and national government) in making and enforcing laws.

While public hygiene can be enforced, personal hygiene is a matter that must largely be the result of education.

PERSONAL HYGIENE

The care of the individual, those things which are largely under his control and which he should do for himself, are: the regulation of his meals—the amount, char-

acter, and mastication of them; the amount and character of drink; hours of rest and sleep; ventilation of rooms; personal cleanliness, for clean bodies and clean clothes lessen the chances of blood poisoning in accident cases; washing of hands before meals; daily washing of feet; proper fitting of shoes; amount and kind of clothing; care of the eye, ear, and nose; brushing of teeth; regularity of habits; the cultivation of cheerfulness, for the mind has much to do with the body and especially with tissue changes and secretions; regularity of work.

The first condition of health is fruitful toil. Work is not a necessary evil—it is our greatest safeguard against disease and advancing old age. The individual should be taught, and definite results are to be obtained from definite conduct. It has frequently been asserted that a large percentage of accidents occurring about plants are due to fatigue. From observation and inquiry it would seem that the greatest number of accidents are due to carelessness, some to ignorance, some to alcoholism, and other cases to a lack of proper guarding of machinery. Still, fatigue must be considered. The determination of physiologists show that constant and rapid motion of a muscle produces fatigue by the accumulation of lactic acid and carbon dioxide within it. It is, however, reasonable to suppose that fatigue is due not alone to accumulation of acid within muscles, but also to a lack of carbohydrates caused by improper feeding, or to excess of alcohol, or to deranged metabolism—due to lack of oxygen, or to loss of sleep, or the condition of the skin, or the amount of fluid taken, or as the result of putrefaction in the intestines and the formation of certain aromatic bodies and absorption of them in the system. If this is true, what a field of effort is opened to us for the study and correction of such conditions; how easily we see that loss of efficiency can be connected with matters of personal hygiene—how great the importance to both employer and employee of education in such matters.

SANITATION BY EMPLOYING COMPANIES

Under the second head come those matters relating to health that should be worked out within the plants. Among these may be mentioned periodical physical examinations of employees; furnishing a wholesome supply of drinking water, with regulation of its temperature and method of distribution; adequate washing facilities; a sufficient number of properly constructed clean, light, and well-ventilated toilets; proper sewage disposal; good ventilation, with prevention of fumes, dust, and smoke, or proper disposition of them; clean floors and yards; proper methods of heating in winter and cooling appliances for heated work places in summer; good lighting; provision for first aid; and possible consideration of lunch and rest rooms. Among questions cognate to these are problems relating to hours of labor and periods of rest. In many plants such matters as these have already been taken up with those in charge. In the building of plants it is well to keep these things in mind, for, if included in construction, their cost would be less than if added later.

I cannot too strongly urge that, when money is available for welfare or sanitary work, it be spent first for the purposes just enumerated, rather than for the building of club houses or reading rooms, or for lectures, playgrounds, recreation centers, planting of trees, flower gardens, or visiting nurses; for, while these are all desirable in themselves and appeal to the general public, they are not by any means of first importance. Nor should the money be expended for the correction of town or city conditions, because these things should be the care of the body politic

—the community as a whole. Furthermore, one must keep in mind that work of such character must be limited—that too much paternalism is unwise and against public policy. What these limits are, only the future can decide. At present the first consideration of each company should be the safety and health of the workmen within its plant.

SANITATION UNDER PUBLIC AUTHORITY

This brings us to the third heading—the making and enforcing of sanitary laws by public authorities. A healthy organism can largely adapt itself to its surroundings, whether in the arctic circle or at the equator, but it cannot adapt itself to bad milk from diseased cattle, impure food, polluted water, dirty streets, putrid garbage, fly-breeding manure heaps, mosquitoes, bad drainage, crowded sleeping rooms, foul air, and contagion.

The regulation of such conditions is chargeable, not to employer or employee, but to the city, town, or state as a whole. Such matters are as much the care of the public as are schools, fire, or police, and they should not be left to the haphazard of charity. Nor should they be left entirely to those whose duty it is to enforce the laws. These officials are oftentimes absolutely dependent for their daily bread on the persons over whom they are called on to exercise authority, with the result that the laws are but indifferently administered.

The losses entailed are largely calculable. When we consider the loss in wages, loss of time in school, and cost to the state from lack of promotions, sickness in hospitals, drugs, doctors, nurses, undertakers, the effect on the family from the loss of the father, the wage-earner, and a host of things too numerous to mention here, the economy of hygienic measures becomes apparent. But who shall measure the loss in efficiency of a workman if a member of his family is ill and his mind is not on his work? How much also has this mental abstraction, due to anxiety, to do with accidents?

After long and careful study, I find that the proper standard of health—and, therefore, efficiency—cannot be maintained in the iron and steel and allied industries because of the lack of proper laws and the inadequate enforcement of existing laws by national, state, and local authorities. Enormous sums of money are paid in taxes for which there is no adequate and proper return.

Health departments are never fully equipped. Very few deserve the name, and some are simply a name. In the past, and even today in the majority of places, matters which pertain to public health and to hospitals have been and are largely matters of private charity.

SOME SIGNIFICANT FIGURES

Death rates are falling wherever the mandates of hygiene and sanitary science are obeyed. While in many places much has been accomplished, other places are still in the condition of sanitation prevalent thirty years ago.

A study of causes of death shows that, in general, but 4 percent die from old age, 4 percent more from violence, while 92 percent die from disease. Of this last group, nearly one-half are due to disease of environment—that is, to diseases which are the concern of health authorities, diseases which by proper supervision could be wholly eliminated. There is no necessity for deaths from typhoid fever, tuberculosis, or diseases of like character. They are wholly preventable.

The determination of the health necessities of communities is based principally on the death rates and general inspection. Taking fifteen of the principal towns visited for the institute, excluding the large cities, the death

rates averaged 19 per 1,000—easily double what it should be and at least one-third more than the rate of some cities of larger size. For instance, Minneapolis, with over 300,000 population, has a death rate of 8.63 per 1,000, and even New York and Chicago, with their dense and heterogeneous population, have death rates of only 15.1 and 14.5 per 1,000, respectively.

The basis of sanitary work is registration of vital statistics. In not one state in the Union is there a complete registration of births, and fully one-half of the country has no registration of deaths.

IMPORTANCE OF MILK SUPPLY

Of the matters that need remedying by the authorities, certain things stand out more prominently than others. That which is preeminent—so far as it affects the growth, health, and life of children in the home—is the condition of the milk supply. This is a matter of vital importance. Not alone does it affect children, but it stands as second as a cause of typhoid in adults; and, although the agitation for supplies of clean and wholesome milk has been going on throughout the country for several years, in many places nothing has yet been done. In a number of towns where the industries connected with the institute are located I have had occasion to visit some of the principal sources of milk supply, and have found that they could hardly be worse. In cities advanced in matters pertaining to health it is usual to mark the standing of dairies on a score card on the basis of 100. Using such a card, some of the dairies visited scored 8 or 10, others 2 or 3, and to some I was unable to give a single point.

NEGLECT OF CONTAGIOUS DISEASES

Again, among children it is noticed that the death rates from contagious and communicable diseases are high. It has been shown by records that such diseases are largely spread through the medium of public schools. The approved method of control of such a condition is by a system of medical school inspection and proper quarantine and disinfection, and the reporting of cases by physicians. But such a thing as medical school inspection is almost unknown, except in a few large cities, and even there it is not practiced to its fullest extent, while quarantine and disinfection are largely left to the family physician. In many instances cases of contagious diseases have no physician and are not reported at all, thus giving opportunity for the spread of disease to others. Little or no provision has been made for proper care of contagious disease among adults. Contagious disease hospitals are lacking everywhere. In two places visited it was noticed that school houses costing more than \$215,000 each had been erected, but at each place the contagious disease hospital (or, as they properly term it, "the pest house") cost only about \$125.

Further study of death rates shows that the mortality from tuberculosis and other diseases of the lungs is high. It takes but little investigation and study to find the principal causes. Among these is foul air. Crowded sleeping rooms are found everywhere. It is conceded by sanitarians that the least possible space for each person in sleeping apartments should be 400 cubic feet, and the air should be changed hourly; yet almost everywhere workmen were found occupying much less space, frequently less than half that amount, with no windows open and no system of ventilation, with beds often continuously occupied by the interchanges of day and night shifts, those working at night taking the place in bed occupied by those that work in the day and conversely. Metabolism—

that is, the body processes and chemical changes that take place in the tissues—cannot be properly carried on under such conditions, especially the oxidative processes. So a lack of fresh air and the breathing of expired air in sleeping rooms unfit a man for work. They cause a loss of vigor, lowered vitality, loss of appetite, anemia, and loss of resistance to disease. These crowded and ill-ventilated rooms were frequently found in the back of saloons or above them. Many workmen, in their desire to save, choose to board at such places, because board is furnished at the low rate of \$3.50 per week. With the present high cost of living, this appeals strongly to the single laborer, and the saloon makes its profit from the sale of intoxicants. The combination of alcohol and foul air readily accounts for disease.

BETTER MUNICIPAL WATER SUPPLIES ARE NEEDED

In a large percentage of the plants and in towns controlled by the industry the drinking water supplies belong to the companies themselves, and care has been taken to purify and protect such supplies; but in many of the towns visited the town water was found polluted, and in others the water so unattractive by the amount of turbidity due to the mud and silt it contained, especially during the spring freshets, that it was useless even for washing, not to mention drinking purposes. Inasmuch as typhoid, diarrhea, and dysentery are largely spread by polluted water, the necessity for better municipal water supplies is obvious.

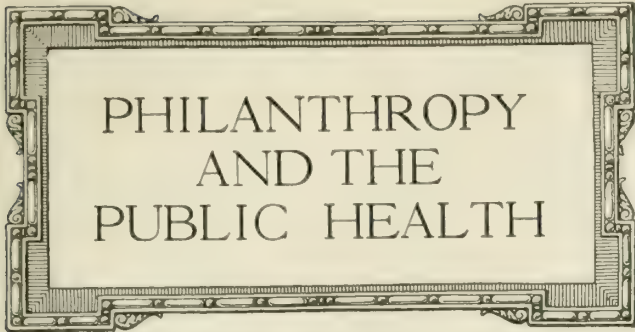
Garbage is generally not collected, and fly-breeding stable manure is permitted to be heaped up beside stables and in back alleys throughout the year. Many towns are without sewers, and very few have any system of sewage disposal. In a number of places where there are no sewers, cesspools take their place. These are connected with limestone caverns, and no one knows where the sewage goes. It frequently happens that a neighbor pumps it up as well water. So I repeat, not only conditions surrounding the man when he is at work must be guarded, but also those conditions surrounding him when away from work. Of what avail is the furnishing of wholesome water to the man when at the plant if he must take a polluted supply when he returns to his home.

SUMMARY

Thus I might go on enumerating the various sanitary undertakings resting as a duty on cities, towns, and villages, but the instances I have given are enough to show the necessity for action. As large taxpayers, those who manage and control plants should exercise their prerogative in demanding that public authorities perform their proper functions in promoting the health and happiness of the people.

Summarized, these duties well performed mean pure air, wholesome water, an uncontaminated food supply, and relief from those factors that detract from physical comfort. They mean better work accomplished, and thus economy to employing companies by increased industrial efficiency; they mean decreased loss of time due to preventable illness; they mean decreased death rate from preventable diseases; they mean prevention of the spread of communicable diseases; they mean betterment of living conditions; and, finally, they mean contented workmen, and contentment is greatly to be desired.

William B. Hackenburg was reelected in June to the presidency of the Jewish Hospital Association of Philadelphia for the fortieth consecutive year.



Conducted by THE NEW YORK ASSOCIATION FOR IMPROVING THE CONDITION OF THE POOR.
 BAILEY B. BURRITT, General Director.
 WILLIAM H. MATTHEWS, Director,
Department of Family Welfare.
 DONALD B. ARMSTRONG, M. D., Director,
Department of Social Welfare.

Please address items of news and inquiries regarding Philanthropy and the Public Health to the New York Association for Improving the Condition of the Poor, 105 East Twenty-second street, New York City.

Mental Clinics and Their Definite Purpose

BY DR. E. H. LEWINSKI-CORWIN

The need of preventive and after-care of persons suffering from mental disorders has been long recognized. On many occasions the need of out-patient clinics devoted exclusively to ambulatory mental cases has been advocated, and in 1913, due to the efforts of the State Charities Aid Association, a law was passed in New York state similar to that of Massachusetts, empowering the state hospital for the insane to establish out-patient departments in the larger centers of population in their respective districts. The advantages of mental clinics, operated as parts of the state hospitals, can be summarized as follows:

1. They contribute toward an early recognition of mental disorders.
2. They take care of convalescent patients discharged from the state hospitals; they make possible earlier discharges from the hospitals and thus relieve the distressingly crowded conditions; and they also make possible the paroling of a large number of patients. Hitherto paroled patients have been outside the control of hospitals.
3. By making the out-patient departments integral parts of the state hospitals, continuous care and treatment of certain types of cases is made possible at a much lessened cost to the state.
4. The visiting physicians and nurses and social workers of the clinic can straighten out many conditions predisposing to the loss of mental balance, and bring together a great many facts with reference to the environment of the patients, which might afford a better understanding of one of the causes of mental disturbance.

The following ten of the fourteen state hospitals of New York have taken advantage of the law of 1913 and established out-patient clinics:

1. The Rochester State Hospital maintains one out-patient clinic at the hospital and one field agent.
2. Manhattan and Central Islip has one after-care agent. Physicians from these hospitals conduct one clinic at the Cornell University Medical College and one at St. Joseph's Hospital in Yonkers.
3. The St. Lawrence State Hospital at Ogdensburg has a dispensary at the hospital and recently opened one at Malone and one at Watertown. The superintendent sends a physician to these towns once every four or five weeks. Notifications regarding the time when the clinic is held and its purposes are published in the local press some time before the clinic, and the same method of procedure is true of every other clinic which is open only at certain times and which caters to a very large section of the country.
4. The Hudson River State Hospital at Poughkeepsie has a dispensary at the Board of Health building. A field agent is employed for the work.
5. The Buffalo State Hospital has opened a clinic at the hospital and has a field agent.
6. The Long Island State Hospital in Flatbush has one dispensary at the institution itself and one at the Long Island College Hospital.
- 7, 8. The Long Island and Kings Park State Hospitals maintain

jointly a clinic at the Williamsburg Hospital, which is situated in the crowded section of Brooklyn.

9. Gowanda State Hospital has a field worker, and maintains a clinic at Jamestown in connection with the Women's Christian Association Hospital and another in Welcome Hall at Buffalo.

10. The Mohansic State Hospital holds a clinic in the rooms of the Associated Charities in Peekskill.

To summarize, ten of the fourteen state hospitals have one or more mental dispensaries. In all, there are now thirteen dispensaries and eleven of them have field workers. It should be remembered, however, that two of the state hospitals are devoted to the care of the criminal insane, and it is hardly possible that they could establish out-patient clinics.

The analysis of the cases attended at the various clinics in the state shows that the clinics reach the desired class of patients and are being availed of freely. It is important to bring this matter to the attention of physicians, that they may avail themselves of the opportunities which these clinics offer to the mentally unbalanced.

The Committee on Mental Hygiene of the State Charities Aid Association, which is in direct touch with the work, feels that there are several needs which should be met at the present stage of the development of the mental out-patient clinic system. These are as follows:

1. The need of official direction and responsibility for the work of the various dispensaries.
2. The need of uniform records and of regular and adequate reports by the superintendents of the hospitals to the State Hospital Commission.
3. The need of coordinating the activities of the clinics into an effective system.
4. The need of establishing and maintaining high and uniform medical standards in all of the clinics.
5. The need of establishing a division of preventive and after-care in the State Hospital Commission, to be directed by a physician especially trained in this kind of work.

Nutritional Guidance

BY FRANK A. MANNY,

Special investigator, Bureau Welfare of School Children, New York Association for Improving the Condition of the Poor.

The time when we come to conscious responsibility for anything that we have to do is always interesting and troublesome. Self-support and family support were subject to chance and immediate pressure for ages before they were accepted consciously and made a matter of program. It is a long step from the period when this was accomplished to our present-time budgets and dietaries, but the responsibility for occupation led inevitably, as soon as margin enough was available, to a closer inspection of nutrition and a recognition that it must be planned for.

The term nutrition is used here in a broad sense as the most convenient word by means of which to express an estimate of health and bodily welfare. Naturally one's first thought in this connection is of food, and rightly so, for it is food influenced and reconstructed by air, exercise, sleep, occupations, interests, and other factors which we are considering, at least vaguely, when we refer to the state of nutrition.

Newspapers and magazines are witness to the increasing public interest in the matter. Like every other "newness," this stage of planning has had its amusing and distressing aspects. It was too promising a field to fail to attract the less well balanced—for instance, recall Lowell's

"Salt of the earth,
 In what queer guys
 Thou'rt fond of crystalizing!"

Naturally, too, the overintrospective have seen in the

control of feeding and other health matters a chance for a worthy subject over which to worry. Both crankiness and worry have often been supposed to be caused by this acceptance of responsibility rather than seen to have been waiting in readiness for any available peg on which to hang themselves. It is only fair to remember, too, that some of the fads which have been most ridiculed in the past are matters of course today and others of them now receive respectful attention. But to take up an old activity in order to think about it, and to do this skillfully and gracefully at the start is unusual. We have been slow to learn that some less desirable food may be more serviceable for us than too great concern for better, and that meal time is not the best occasion for food analysis.

The societies responsible for giving relief on a large scale realized in time their opportunity, and many of them have employed expert dietitians, who have come to wield a wide influence. A university investigator who had occasion last year to make studies among the members of several nationalities stated that it was difficult to find families on the relief level who did not reflect very definitely the food standards of one or another of the leading social organizations. In one of the schools the physician and nurse were making inquiries to show the breakfast problem among the pupils. In answer to the question, "What did you have for breakfast?" from a large number came the reply, "Coffee and bread," "Coffee and bread," with an occasional "Bread and tea," until the monotony was relieved by "Cocoa and cereal." The two inquirers looked at each other in surprise; then the nurse asked the child's name and commented, "Oh, that's one of the A. I. C. P. families! I wish those above the relief line could have the same instruction."

Just what proportion of the population of such a city as New York is receiving relief it would be hard to estimate. The total amount for a year must be enormous. There are not only the large societies wholly devoted to the work, but from hospitals, churches, and schools there is, especially during the winter, a stream of service which, judged by what can be seen, must be in its entirety a very large item in the total of the city's expenditure for living. This takes no account of the great quantities given direct from family to family.

Much of this giving is, no doubt, less wisely directed than is desirable. In one of the schools during the winter hundreds of pupils were fed free of cost largely from funds contributed by the teachers. The chief item in the report rendered was for coffee for the children.

Despite these facts and the studies of such men as Chapin and Streightoff, who find an \$800 minimum necessary for the typical family of five to avoid overcrowding and underfeeding, there are many otherwise well-informed persons who insist that the economic factor is of minor importance in dealing with the city's nutrition problem. A social worker, speaking of a family, said, "There is no reason why there should be any undernourishment there, with \$50 a month income and only seven to feed." A few questions and suggestions brought from her the admission, "To be sure, I could not live on that amount with no one but myself to consider."

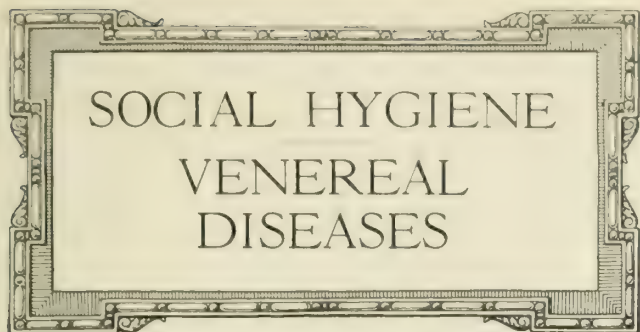
A somewhat extended study of the defective nutrition situation shows four leading factors to be taken into account—poverty with neglect and ignorance, disease, improper and badly prepared food, and defective general hygienic conditions. There are hundreds of social organizations which in various ways are seeking to meet these defects by what may be called nutritional guidance. The part that the school can play is an interesting possibility,

for it can be of direct assistance in totally independent families as well as in those less fortunately placed. The situation must be seen as a whole and its various needs be met. Buying, for instance, may be as important as cooking, and the teaching of the latter to the older girls in a school does not meet the need in the homes, indicated by the fact that the family marketing is found in many neighborhoods to be done largely by the little girls in the primary classes. It is possible that the collective buying and the resulting neighborhood stores forced by economic considerations on the relief organizations may prove to be among their most significant educational developments. The school luncheon, intended at first to relieve distress, has thus far been successfully making its way in demonstrating how much can be accomplished in feeding by bringing into cooperation the thousands of pennies usually spent to little profit. The standards set serve, furthermore, to make the total expenditure for the year a positive factor in securing and maintaining better food conditions in the city. When, however, this agency comes to be used as an educational force in homes and neighborhoods, its increased service can scarcely be estimated.

The Bureau of the Welfare of School Children of the Association for Improving the Condition of the Poor, in cooperation with the Bureau of Child Hygiene in the New York city Department of Health, is conducting an inquiry into the subject of defective nutrition. The nutrition scale developed in Dunfermline, Scotland, in the work of the Carnegie Trust has been put into use by the medical inspectors of the city. The state of nutrition of each child examined is passed on and indicated in one of four groups. The result has been to bring under consideration a much larger number of children and to differentiate them more specifically with reference to the care needed.

A number of other cities are watching this development with interest, and several are planning to make use of the scale. There is need of a much more definite scheme of diagnosis that has yet been worked out, and it is hoped that this may take form in connection with a clinic especially devoted to defective nutrition cases. The open-air classes of the schools could well be used as observation stations for members of special groups, as the undernourished and the cardiacs. In addition to these classes there is need of summer and all-the-year country stations for more adequate treatment. This summer the A. I. C. P., in cooperation with the New York *Globe*, will conduct an experimental camp in which 100 boys suffering from defective nutrition will be cared for and made the basis of a special study.

Miss Electa Van Eman, formerly president of the Los Angeles County (Cal.) Nurses' Association, was elected president of the California State Nurses' Association at the annual meeting recently held at San Jose. Other officers elected were: Miss Lillian White, Oakland, first vice-president; Miss Groth, San Jose, second vice-president; Miss Saunders, San Francisco, treasurer; Mrs. Amos Taylor, San Francisco, secretary. Among the papers read at the meeting were the following: "Training the Selected Student Nurse in Mental Cases," by Miss Mary Sweeney, R. N., San Francisco; "Treatment and Nursing of Mental Cases," by Dr. Leonard Stocking, of the Agnew State Hospital; "Cooperation in Nursing Between General and State Hospitals," by Dr. R. G. Brodrick, superintendent of the San Francisco Hospital; "The Nurse as a Social Worker," by Miss Marie Horgensen, R. N., San Francisco; "The High School Girl in Relation to Nursing," by Miss Minnie Sullivan, R. N., Los Angeles; "The Influence of the Graduate Nurse on the Pupil Nurse," by Miss White, Oakland; and "The Personal Side of the Training School," by Miss Florence Ritchie, R. N., Los Angeles.



Conducted by WILLIAM F. SNOW, M. D.,
General Secretary, The American Social Hygiene Association.

Please address items of news and inquiries regarding Social Hygiene to the editor of this department, 105 West Fortieth street, New York City.

The Problem of Venereal Disease in Public Health Nursing BY THE NURSES OF THE INSTRUCTIVE VISITING NURSE ASSOCIATION OF BALTIMORE

In order that we may have a clear and intelligent view of the difficulties confronting the public health nurse in dealing with venereal diseases, let us first have a precise understanding of just what is meant by "venereal diseases." Webster defines the term "venereal," in its medical aspect, as "arising from sexual intercourse." From this it can well be understood that in the lay mind, and, unfortunately, in many professional minds as well, any condition with which we associate the term "venereal" immediately arouses the suspicion of unlawful or illicit intercourse, and stigmatizes the patient as guilty of venery. Medically, it is a well-established fact that the so-called venereal diseases may be, and frequently are, innocently acquired, and to treat every case of gonorrhea, syphilis, or chancroid as the direct result of licentiousness will frequently result in unhappiness and the suffering of the innocent.

We often fail to distinguish between marital, extra-marital, and innocent infection, and consequently the victim is often shunned, despised, and treated as a physical and moral leper. Syphilis, gonorrhea, and chancroid are well recognized germ diseases, the organisms of which have been isolated and are easily distinguished. They are communicable diseases, and, while transmission takes place ordinarily through the genitals, extragenital infections are not infrequent. This is particularly true of syphilis. As far as the treatment and nursing of the diseases are concerned, it makes little or no difference just how the disease has been acquired, but to preserve the integrity of the family and prevent disruption calls for the exercise of tact and mature judgment.

While gonorrhea is essentially and primarily a disease of the mucous membranes of the genital tract, infections of the rectum and eye are frequent. It must also be remembered that the gonococcus, the germ of the disease, is highly contagious and readily communicable, not only directly, but often through an intermediary host; that all gonorrhea is not the result of intercourse, but may be due to infections through the handling of infected bed linen, towels, or anything which may have been in contact with the infection. The female is especially liable to these accidental or innocent infections, and one should hesitate before accusing another of infidelity or questioning the chastity of a patient. In young female children this condition is quite common, and, while many cases of gonorrhea in the infant are recorded as the result of attempted rape, most of these gonorrheal infections in children are accidental ones. If it does occur innocently in children, there is no adequate reason why it may not so occur in adults.

Considering the alarming statistics of the frequency of gonorrhea in the male, the peculiar mental attitude of the vast majority of men as to the harmlessness of the disease, and the now well-established fact that gonorrhea remains incurable in a large percentage of infections, it can easily be understood why marital infections are so common. These infections, with the consequent later complications of endometritis, salpingitis, or peritonitis, form one of the unhappiest and most difficult of nursing problems. The unsuspecting wife rarely surmises the source of her condition, and, under the masked diagnosis of appendicitis, she goes through her martyrdom, little realizing that her disease is directly attributable to an uncured gonorrhea in the man whom she has promised to love, honor, and obey. Any gynecologist will corroborate the statement that a vast number of abdominal operations are necessitated by gonorrheal infections.

Marital infections of syphilis are fortunately not as common as gonorrheal infections. This may be due to the fact that during the infective stage of syphilis there are often ocular and easily recognizable evidences of the disease. The infective stage of gonorrhea may persist for months and even years, and there is no way of recognizing the disease except by a rigid examination.

In a general way, it might be said that gonorrhea is a communicable disease from its earliest symptoms until its complete cure, which can be determined only after a rigid microscopic examination. This is well illustrated in the following case:

G. and R. C., aged respectively 2 and 4 years, were referred to the Instructive Visiting Nurse Association by the Federated Charities, and said to be suffering from a "discharge." The children were taken by the nurse to the Johns Hopkins dispensary and a diagnosis of gonorrheal vaginitis was made. With daily care in the home and three visits a week to the dispensary, the case was carried from January 26, 1915, until January 19, 1916, when the children were discharged after three negative smears. During this time the children were not allowed to visit, or to attend school or kindergarten. Following their discharge they went to visit some cousins in the suburbs. Four days following their visit of three hours the two little cousins (girls) were reported infected.

In a recent article by Dr. Snow, of the American Social Hygiene Association, he brings out the fact that in two large clinics in New York only 9.7 and 9.4 percent of the cases of gonorrhea were discharged as cured. This means in substance that over 90 percent of the cases remain gonococcus carriers and actively contagious. Equally unsatisfactory results have been found in the treatment of syphilis.

Syphilis is communicable through the discharge from a syphilitic sore, which is usually visible. The syphilitic parent, however, reproduces a syphilitic child, and this forms an important economic factor in the community; for sooner or later the syphilitic child becomes a dependent, and provision must be made for its sustenance, education, and care outside the usual channels of organized charity.

The lack of hospital facilities for the treatment of these diseases must be considered from the standpoint of both hospital and patient. Strange as it may appear to the uninitiated, it is nevertheless true that venereal patients are not received into hospitals unless suffering from some intercurrent disease or requiring an operation. An investigation now being conducted in New York city has shown that of thirty general hospitals only ten receive patients of recognized cases of syphilis in actively infectious stages; but, once admitted on some other diagnosis, twenty-seven

give care and treatment, although only seventeen provide the treatment of a syphilologist. Only nine receive patients (adults) with gonorrheal infections needing hospital treatment, and two of this number specify that only surgical cases are accepted. Thirteen of the thirty will not receive medical cases with known complications of syphilis or gonorrhea.

Venereal cases are not accepted when most amenable to treatment, and when proper treatment is most urgently needed. A patient applying says in substance: "I am poor, unable to meet the expense of proper treatment, have no facilities, and I am unable to purchase anything but the bare necessities of life." To which the hospital replies in substance: "We are sorry, but wait until your gonorrhea gives you peritonitis, or salpingitis, or cystitis, or until your syphilis totally incapacitates you by affecting the spine, the brain, or the bones, then, but not until then, can we do anything for you. We are truly and sincerely sorry for you, but you know a few of the victims of these diseases escape these serious complications, and maybe you will be one of the fortunate ones, and after all will not require hospital treatment. But if you are one of the great majority and do get peritonitis or salpingitis, and require an abdominal operation, which will lessen your economic value to the community, come to our gynecological ward and we will operate, or come to our urological surgeon and he will do the latest approved prostatic operation. Or if your syphilis terminates in locomotor ataxia, brain tumor, caries of the bone, or valvular heart disease, or paresis, then come to us and we will try a new method of treatment, with which we sometimes get favorable results." This state of affairs is unfortunate, but unfortunately true.

In defense of the hospital attitude, we must remember these are communicable diseases, and not alone must the greatest care be exercised in handling clothing, kitchen utensils, urinals, and whatever may come in contact with the patient, but it requires a separate, isolated building, with a separate corps of nurses and equipment. Our hospitals are not adapted to these conditions, and consequently, on the theory of "the greatest good for the greatest number," these cases must be refused admission.

Until these diseases are considered in their true light as highly communicable diseases, and, as such, reportable, progress looking toward their eradication will be slow. We campaign against tuberculosis, urge isolation and strict quarantine, and enforce penalties on physicians and health officers failing to report the communicable diseases—scarlet fever, diphtheria, measles, etc.—but we sit idly by and allow the grim monsters, syphilis and gonorrhea, to have full sway. As appalling and terrifying as are tuberculosis and the exanthematous diseases, they fade into insignificance in the physical, social, and economic damage they do when paralleled with syphilis and gonorrhea.

Public health nurses have long been alive to the dangers of these diseases and the inadequate care, even lack of care, afforded them, but it seems very difficult to arouse the physicians, hospitals, boards of health, and charities, and even the public itself, to the need for places in which to treat them. Propaganda in this direction has had very little weight, for it is usually felt that a person who gets up to talk social hygiene is a "queer one," indelicate and bold, and he or she is usually scoffed at. As long as we enshroud these diseases in mystery and hide their true character with deceptive diagnoses, so long will they be rampant, a moral menace, an economic drain.

Jane Addams, in a recent article, says: "In twenty months over 600 children passed through the children's

ward for venereal diseases in Chicago. All but twenty-nine of these children were under 10 years of age, and doubtless a number of them had been victims of that wretched tradition that a man afflicted with this incurable disease might cure himself at the expense of innocence. Crusades against other infectious diseases, such as small-pox and cholera, imply well-considered precautions dependent on wide-spread education and an aroused public opinion. To establish such education, and to arouse the public in regard to the present menace, apparently presents insuperable difficulties. Many newspapers, so ready to deal with all other forms of vice and misery, never allow these evils to be mentioned in their columns, except in the advertisement of quack medicine. The clergy, unlike the founder of the Christian religion and the early apostles, seldom preach against the sin of which these contagions are an inevitable consequence. The physicians, bound by a rigorous medical etiquette, tell nothing of the prevalence of these maladies, using a confusing nomenclature in the hospitals, and write only contributory causes on the very death certificates of the victims."

While we have no definite statistics regarding venereal diseases in children in Baltimore, the public health nurses daily face a similar situation in dealing with these infections in children.

Since the recovery of these diseases is largely dependent on eternal vigilance, constant cleanliness, nutritious food, and proper medical supervision, the problem of caring for these children in their homes is a most difficult one. Congested housing, low wages, and limited mentality tend to make the recovery of these little ones almost hopeless. The drugs necessary for the treatment of venereal diseases also play an important role from an economic standpoint, as they are expensive and far beyond the means of most of our patients.

The tendency to chronicity and the subsequent demoralization is well illustrated by the following cases:

The family of S. consists of the husband, wife, and six children—three boys and three girls. The man was employed as a baster in a tailoring establishment; they were buying their home and living in moderate comfort. In February, 1912, the three girls, aged respectively 9, 8, and 3 years, were referred to the Instructive Visiting Nurse Association by the Johns Hopkins social service department as suffering with gonorrheal vaginitis. The source of the infection was not determined, and the man and woman were both free from the disease. The treatment of these children covered a period of nearly four years, and during this time an almost complete degeneration of the family took place. The fact that the children had to be cared for in the home entailed so much expense in the form of extra beds, bedding, underwear, laundry, drugs, and nursing appliances, that the Benevolent Society had to be called in to give assistance and the family soon succumbed to "being helped." The woman lost her initiative, and even in trivial matters, instead of putting her shoulder to the wheel, she spent the greater part of her time going from the office of one agency to the other, neglecting her home and children.

With the daily treatment in the home by the visiting nurse, in addition to three visits a week to the dispensary, the disease persisted unabated for a year. The trouble was thought to be reinfection brought about by the congested living, and a conference of the agencies interested in the family was called. It was decided to place the children out in separate homes under strict supervision. Three very desirable homes were found where there were no other children, and the plan given a four months' trial, but,

while the general physical condition of the children improved somewhat, the disease showed little or no improvement.

The only recompense derived from this expensive experiment was the fact that the house was thoroughly cleaned in the meantime. Prior to the advent of this infection this had been an independent, self-supporting family, but during the four years' treatment of the girls every member of the family came under the care of the visiting nurse or the social service department. The father was operated on for an eye condition; the mother was twice admitted to the hospital, once for a growth of the uterus and at another time for a curetment, and was also treated in the eye clinic and in the neurological clinic. The oldest boy had to be placed in a sheltering home for truancy, the second youngest admitted to a hospital for gonorrheal ophthalmia, and the youngest for a fractured humerus, an accident that occurred while the mother was at the office of the milk and ice fund. This extraordinary expenditure of money, time, and energy, loss of time at school to the children, and the irreparable damage done this family could have been averted had the proper hospital facilities been available for the treatment of these children.

It may be Utopian, but we do look forward to the time when we shall treat venereal diseases as we do other communicable diseases—namely, by registration, the providing of adequate hospital facilities for the isolation and treatment of those who are either unable or unwilling to protect themselves and others from the contagion, and the enactment of legislation providing for the enforcement of laws looking toward the control and ultimate eradication of this preventable scourge of civilization.

ACCIDENTS AND IMMIGRANT WORKMEN

One Industrial Corporation Requires Foremen to Assume Responsibility for Untrained Men

An interesting innovation is in operation at the Amoskeag Manufacturing Company plant, Amoskeag, N. H., to reduce accidents at especially hazardous work. The overseer or foreman is required to fill in, sign, and file with the employment department a certificate stating that he personally provided a suitable and safe place in which to work, inspected the machinery and apparatus to be used, and found them safe and suitable for the work in hand, explained the company's rules and regulations for employees engaged in such work, gave express orders never to clean gears, belts, or moving parts of machines while in motion, and acquainted the fellow-workman selected to teach the new employee with the latter's inexperience and instructed him to point out the dangers incident to such work. Special care is taken to give such instruction in the new employee's own language—if necessary through an interpreter, whose name must be given. Such fellow-workman is also required to fill in, sign, and file a somewhat similar statement as to his own personal responsibility. These certificates are filed with each workman's employment record. It is claimed that the personal responsibility thus placed on the overseer has reduced the number of accidents.

Dr. Geo. E. Hyde assumed the superintendency of the State Mental Hospital at Provo, Utah, June 1, succeeding Dr. D. H. Calder, resigned. Dr. Calder will take a vacation of several months in California, and it is reported that on his return he will establish himself in Salt Lake City as a specialist in mental and nervous diseases.

DEPARTMENT OF DIETETICS

Conducted by MISS LULU GRAVES,
Dietitian of Lakeside Hospital, Cleveland, Ohio.

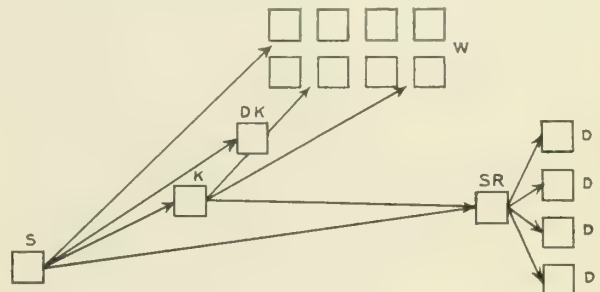
Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, Ohio.

The Preparation and Service of Diets in the Massachusetts General Hospital

BY RENA S. ECKMAN, Dietitian.

Although each hospital has its own dietary problems peculiar to its needs, and depending on the topography of the institution as well as on other basal principles of nutrition and care, the description of how one establishment has planned the feeding system may be of interest to those whose plans are still in the formative stage.

In the first place, there is a definite interrelation connecting store, kitchens, and wards. A diagram will represent this relation graphically:



S, store; K, kitchen; DK, diet kitchen; W, wards; SR, serving room; DDDD, dining rooms for men, help, women, officers, and nurses. The line from the store to the wards and to the serving room denotes butter, eggs, sugar, and other similar articles which may with advantage be sent directly.

It is evident that by far the greater quantity of supplies must first enter the kitchen as raw material and their products be sent to the respective destinations at meal times. Each ward has a set of containers by which the meals are carried. One large box holds all of these containers. The wards are widely separated, but subways and tray elevators bring the food at the proper time. All food supplies that can be handled by the general kitchen are sent at one time. A smaller kitchen, arranged for the purpose, takes care of the extra work done for the patients, and also serves as a practice field for pupil nurses and pupil dietitians.

Each ward has a steam table in which to transfer the food on its arrival from the general kitchen. As soon as reheated, or as soon as practical, the house diets are served to the patients. A few minutes later the extra diet preparations arrive from the diet kitchen. It is planned to deliver them in hot boxes in order that immediate service may follow. A heated trunk was devised for this purpose.

The walls, top, and bottom were built with an air space $1\frac{1}{2}$ inches between inside and outside surfaces. Two heaters were constructed of Russia iron, packed with asbestos. These heaters are put under the baker of the gas range, and, when hot, are placed in the bottom of the food trunk. In the food trunk are placed smaller covered boxes, one for each ward, properly labeled. Each small box is divided into three parts to accommodate different orders of vegetables or meat. When all of the individual ward boxes are filled, they are put into the heated trunk and carried by the porters through the subways to the food elevators. A box is quickly taken out and elevated to the ward kitchen. It is hot when it arrives, and is at once transferred to the patient's tray and served. The porter goes from one ward to another until all food is delivered. This method has proved efficacious so far as delivering hot food to the ward is concerned.

But there is still another condition to be considered: From day to day a number of weighed or specially prepared diets are ordered; these diets must not be subjected to risks of being spilled or mixed with any other food orders, so they are planned to arrive in the wards last of all. We have found it practicable to use one box for each weighed diet. It is built of such depth as to accommodate six fairly deep cups or jars, which will contain the average portions of vegetable or other food which is served. Many of these weighed diets have been diabetic. Often they are low protein or salt-poor diets. Occasionally they are obesity diets or low purin. For diabetes or other metabolic conditions the prescription for the diet must first reach the diet kitchen. Next the calculation must be made to fulfill not only the food requirement, but also to represent a suitable menu and, if possible, please the patient for whom it is intended.

The diet has been made to serve the twofold purpose of treating the patient's condition and also instructing him, for, in addition to his tray, he receives on it not only a list of the foods to which he is entitled, but also the weight or measure of each article is indicated. The patients often become very intelligent in studying the menus, and are quick to notice if an omission occurs, or if the food served does not correspond to the menu. In the so-called "starvation treatment of diabetes" we have often had as many as fifteen weighed diets daily for this disease alone, and this number has kept up for months. Two men who had been patients for an extended time became so expert that, with some help from the dietitian and Edwin A. Locke's book, they were able to plan their own menus and thereby save somewhat the time of the diet kitchen workers.

Last, but not least, of the special diet work we have found the greatest success in sending the diet kitchen nurses who have prepared the food, over to the ward to serve it. The weighed diets have not been confined to one or two wards, although by far the greater number have been in the medical service. Some have been for private patients and a few have been surgical cases. Many interesting, though laborious, proceedings have been brought to bear in arranging metabolism trays with the view to keeping the patient happy and contented while his treatment is carried on by the physicians.

The vigorous semistarvation which the patients undergo, some of them so young, enlists the sympathy of nurse, doctor, and dietitian, and stimulate great effort to provide bulk for the inner man, if not satisfaction. One of the first things to be used to partly appease the longing for bread was a mixture of bran and egg, agar-agar, salt, and saccharin. To offer these coarse "hay bis-

cuit," as they have sometimes been called, to the patient before he has become very hungry is a mistake. But when he craves food and cannot be satisfied, these bran cakes help enormously and may not be omitted ever afterward without a vigorous protest from the patient. While the orders for protein, fat, and carbohydrate remain below 50, 100, and 150 grams, respectively, six to twelve small cakes may be given in a day. When more fat is allowed, cream, either 40 percent or 60 percent fat, is useful in many ways. After reserving a small portion of the day's allowance of cream for coffee or tea, the remainder may be frozen as ice cream, or combined with eggs and made into desserts, or served with the vegetables. So many excellent recipes have been compiled and appear in cook books designed for hospital or nurses' use, that only the unusual requirement of weighed diets need rules for combinations. Most of our recipes have been worked out for individual needs and then are found to be of subsequent use for other cases. Every pupil dietitian, diet kitchen nurse, medical house physician, and even the patients themselves, contribute more or less to the repertoire of useful formulas.

It frequently happens that a diabetic patient does not like vegetables, and perhaps can be induced to eat only one or two varieties. In one case a man relished absolutely not one single vegetable. So far, as long as such patients remain in the hospital, we have been able to give a certain amount of vegetables by mashing and forcing through a strainer and incorporating a mixture of seasoned meat broth or consomme with the strained vegetable.

The dietary rules of orthodox Jews have proved a real difficulty in the hospital treatment of diabetes, and, if they do not speak English or cannot make themselves understood, they will totally frustrate the benefits of hospital treatment because of their inability to break faith with the ritualistic demands of their religion. One patient, the wife of a rabbi, was seemingly obstinate to every tray of food set before her. By conversing with her through an interpreter, it was learned that the bran cakes contained butter, which fact made it impossible for her to eat them within six hours of a meal containing meat. If lard were substituted, she would not dare eat them at all. If chicken fat were used in place of either, they could be taken with meat, but not if cream appeared on the tray. However, if olive oil were used, then they could be taken either with milk or with meat. The woman could not say why this rule was to be followed. But a talk one day on the dietary rules and customs of the orthodox Jews given by a rabbi suggested an explanation, although he said that some of the customs had been so long in vogue that it could not be said with certainty to what source they owed their authority. "Thou shalt not seethe a kid in its mother's milk" was thought to be the prohibiting law against the use of milk and meat within six hours of each other, it being considered the essence of cruelty to do such an act, and the Jew is very humane. To even accidentally spill milk over meat requires the destruction of the latter viand. From this it can readily be seen that the wrong combination of foods on the tray of an orthodox Jew makes it impossible to benefit the patient to either our or his satisfaction.

The diet kitchen force, by their cooperation with the physicians, have had the pleasure of helping patients over other difficulties while treating them for diabetes. Gastric and duodenal ulcers, old fractures that refused to heal, carbuncles, septic fingers and toes—many such conditions have cleared up and others have improved.

Below are given some recipes, most of which are used chiefly in the diet kitchen:

BRAN AND AGAR-AGAR CAKES FOR DIEBETICS

- 2 cups washed bran.
- $\frac{1}{2}$ grain saccharin dissolved in $\frac{1}{2}$ teaspoon cold water.
- 2 eggs.
- 10 grams agar-agar.
- 4 ounces water.
- $\frac{1}{4}$ teaspoonful salt.

Tie bran in cheesecloth and soak one hour. Wash by squeezing water through and through. Change water until it is clear. Wring dry. Heat agar-agar with water until nearly boiling. Stir while heating until smooth. Add washed bran and dissolved saccharin and mix well. Break the eggs and add without beating and stir into the mixture. Divide into 24 small cakes, shape with knife and tablespoon, and bake on a well-greased baking sheet. Considering that the bran is washed free from digestible carbohydrate and is itself indigestible, the only food value lies in the two eggs. Hence 12 cakes equal 1 egg.

BRAN AND LYSTER MUFFINS

- 1 ounce (30 grams) lyster flour.
- $\frac{1}{2}$ ounce (15 grams) melted fat.
- 1 ounce (2 tablespoons) 40-percent cream.
- 1 cup washed bran.
- 1 teaspoon baking powder.
- 1 tablespoon melted butter (15 grams).
- 2 eggs.
- $\frac{1}{4}$ teaspoon salt.

Wash bran as in preceding recipe. Mix the washed bran, cream, egg yolks, and butter. Mix baking powder and lyster flour together and add to first mixture. Whip egg whites very stiff and mix in lightly. Divide in six portions and bake in muffin tins. One muffin equals 1 egg. Casoid flour or Soja meal may be substituted for the lyster flour.

ICE CREAM MIXTURES FOR DIABETICS

Ice Cream No. 1

- 40-percent cream, 3 ounces (90 cc.).
- Water, 1 ounce.
- Egg white, 1.
- Vanilla, $\frac{1}{4}$ teaspoon.
- Saccharin, $\frac{1}{2}$ grain.
- Mix and freeze.

Ice Cream No. 2

- 40-percent cream, 1 ounce.
- Egg (whole), 1.
- Cocoa, $\frac{1}{2}$ tablespoon (3 $\frac{1}{2}$ grams).
- Hot water, 1 ounce.
- Saccharin, $\frac{1}{2}$ grain.
- Mix cocoa with hot water, add cream, beaten egg, and dissolved saccharin. Chill and freeze.

Ice Cream No. 3.

- 40-percent cream, 2 ounces.
- Egg (whole), 1.
- Coffee, 1 ounce.
- Saccharin, $\frac{3}{4}$ grain.
- Beat egg, mix ingredients, and freeze.

Ice Cream No. 4

- 40-percent cream, 2 ounces.
- Saccharin, $\frac{1}{2}$ grain.
- Lemon juice, 4 drops.
- Water, 1 ounce.
- Mix and freeze.

LEMON JELLY FOR DIABETICS

- Gelatin, 2 $\frac{1}{2}$ grams.

- Lemon juice, 20 c.c.
- Boiling water, 90 c.c.
- Saccharin, $\frac{3}{4}$ grain.
- Cold water, 30 c.c.

Soak gelatin in cold water fifteen minutes. Add boiling water, dissolved saccharin, and lemon juice. Stir well and strain through cheesecloth. Pour into mold and chill. May be served with whipped cream.

Food value: Protein, 2 grams; fat, trace; carbohydrate, 2 grams; total calories, 18.

LOW-PRETEIN MUFFINS

- 25 grams pastry flour.
- 100 grams arrowroot starch or potato flour.
- 50 grams molasses (2 tablespoons).
- 25 grams salt-free butter, crisco, or lard.
- 2 teaspoons baking powder.

Water to make a stiff batter.

Mix and sift dry ingredients. Add molasses, water, and melted fat. Divide evenly and bake in six muffin tins.

Wheat Flour

BY G. L. TELLER, M. S., Chicago, Ill.

[Continued from the June issue.]

GRANULATION AND COLOR

In a general way, the origin of flour, whether from soft or from hard wheat, may be determined by its feel in the hand. Flour from soft wheat feels soft and pasty; flour from hard wheat feels loose and granular. It is the pride of some millers that they make a flour which is of even granulation and having a granulation of some degree of coarseness as compared with that of flours from soft wheat. Bakers prize a flour because it has a lively feel, as they express it—that is, when they close their hand on a quantity of flour, it scatters freely in all directions instead of remaining there like a soft putty.

In the early history of flour in America, only soft wheat flours were produced. When the spring wheat flours and the hard winter wheat flours of the northern and western states came into use, they were found to be especially adapted for breadmaking purposes. They are comparatively hard, and are less readily reduced to flour than are the soft wheats. For this reason they were put on the market without being reduced to the same degree of fineness that had been practiced with the soft winter wheats. Evidently bakers connected this characteristic with the other qualities which they possess, and for this reason concluded that the superior breadmaking qualities were due to the coarser granulation. A great many experiments have been made which show that the fineness of granulation within certain limits has in itself little to do with either the amount of bread or the quality of bread which is produced from the flour. As soon as flour is mixed with water the granules are softened and broken up, and we have a homogeneous paste. This is especially true where flour is mixed with machine mixers, as is practiced in the large bake shops at the present time. If the flour is excessively coarse, of the nature well recognized under the name of Cream of Wheat, the granules would not be so readily broken down as when in the conditions ordinarily known as flour, but this is outside of the limit of ordinary practice.

Naturally a flour which is finely ground will be whiter in color than a flour which is coarse, just as snow is whiter than fragments of ice. Coarse flour, therefore, is naturally somewhat darker in color than finely ground flour when examined in the dry or, as millers say, in the

dust. For a great many years millers have judged the color of flour by first pressing it on a slab of wood or other suitable material, so as to give it a smooth surface, and afterward carefully dipping it in water and allowing it to dry. The color of the flour is then seen on the surface of the flour mass. Since this surface has been thoroughly wet, the particles of wheat have run together into a uniform paste and the coarseness of granulation has little to do with the color.

Among wheats two distinct types have long been recognized—white wheat and red wheat. This refers especially to the color of the bran of the wheat and not necessarily to the flour produced from them. On the other hand, the white wheats are usually of a soft, starchy nature, so that the flour from them is likely to be whiter than that from red wheats. White wheats are not extensively grown at the present time, excepting in the soft wheat districts of the Ohio Valley and of the Pacific coast. Certain soft types of red wheat take on a yellowish cast when they have been grown under such conditions as to develop a considerable proportion of starch, and such wheats have been given the name of "yellow berry." Wheats of this type have been extensively grown in certain sections of the Middle West.

Two leading characteristics are exhibited in the character of the color of the flours. The one is dependent more on the character of wheat from which the flour is made and the other is more dependent on the grade of flour which is produced.

All wheat flour, when freshly milled, contains a natural coloring matter which, when extracted in a concentrated condition, is of a bright orange yellow, and which has been fully identified as the same coloring matter which is found in carrots and which is known as carotin. The amount of this coloring matter which exists in the flour material of wheats varies to a large extent. The causes of variation are the varieties of wheat, the sections of country in which grown, and the seasonal conditions. Soft wheats, such as are typical of the Ohio Valley and north and of the Pacific coast, contain a very little of this yellow coloring matter. Hard winter wheats and spring wheats contain much more. Certain types of wheat which are grown in parts of the Middle West are extremely rich in this coloring matter. Another type of wheat, known as durum wheat or macaroni wheat, also contains it in an unusually large amount. This coloring matter is most abundant near the outer portions of the wheat grain and least abundant in the softer inner portions, so that it is somewhat more pronounced in the lower grades of flour than in the higher grades. The finest, whitest flour is of a bright creamy color in its natural condition, but when this yellow coloring matter is removed is a pure, or nearly pure, white.

The finest grades of flour which are especially prized because of the small amount of color and the character of the color which is present are produced from what are called purified middlings. These are fragments of the interior of the wheat berry which have been broken down by suitable machinery in such a way as to exclude all or nearly all of the bran particles. After being broken down and suitably graded, they are further refined in suitable machines in such a way as to remove any trace of bran particles or of the germ of the wheat which may have been mingled with them. They are then reduced to flour. All of the flour which is produced cannot be refined in this way without great loss. For this reason other grades of flour are produced which are not free from bran and from germ. The particles of bran and germ which are

mingled with such flour give it a darker color, which to the experienced eye is readily distinguished both in character and quantity from the color of the higher grades of flour generally called patent flour.

At least four distinct grades of flour are ordinarily recognized in flour markets: The finest grade is designated as patent flour; the third grade is designated as clear grade flour. The former represents a considerable part of the flour which is so made as to be comparatively free from bran. The remainder, which may constitute from 10 percent to 50 percent of the flour, contains a larger proportion of bran and of germ. The second grade of flour, intermediate between these, is the straight grade, and consists of a mixture of the other two in the proportions that they have been produced from the wheat in the ordinary process of milling. A still lower grade of flour is produced which contains less of the actual flour and more of the bran and germ. In winter wheat mills this class of flour is commonly known as low grade; in spring wheat mills it is more commonly designated red dog. This name is applied to it because, when prepared for color examination as described above, it has a pronounced dark-red color. All of the lower grades of flour, containing, as they do, more of the bran and often some of the germ of the wheat, have a more pronounced color than does the first grade of patent flour, and it is this characteristic to which the users of flour most strongly object. If it were not for this, the lower grades of flour would in many cases be selected for food purposes, for they contain more of the gluten and of the mineral matter of the wheat than do the patent flours.

The color of the flour, as stated above, is reflected in the color of the bread produced from it. The bread from a patent flour is of a brighter appearance than from the other grades. That from the lower grades, from soft wheat flours and from some of the hard winter wheat flours, has a pronounced grayness which is readily recognized by those who are familiar with it. That from the lower grades of spring wheat flours, such as a clear, has a pronounced brownish-gray cast. This color of flour is independent of defects in bread caused by lack of skill in its making. Bread from the same flour, made under different conditions, will appear very differently as to color in the bread. This is perhaps one reason why the housewife so much dislikes bread of a dark color. Bread which is of a dark color naturally reflects somewhat on her skill in breadmaking. On the other hand, it is quite true that an article of food which pleases the eye stimulates the appetite, and answers the purpose of a food product much better than one which does not.

Nearly \$40,000 have already been raised toward the rebuilding of the Flagler Hospital, St. Augustine, Fla., which was destroyed by fire in May, and plans are being drawn for a \$75,000 building with the view of starting the construction work at an early date. The building fund will be augmented by proceeds of a series of entertainments to be given by friends of the institution during the summer, and it is planned to complete the fund next winter by a vigorous campaign. Ten thousand dollars of the amount already available is the gift of Mrs. H. M. Flagler, and an equal sum has been donated by Dr. Andrew Anderson, president of the board of trustees.

The Hahnemann Hospital, Rochester, N. Y., is adding a story to one of its buildings to provide quarters for pathological and x-ray laboratories. Both laboratories, when fitted up, will be in charge of Dr. Ralph R. Mellon, at present director of the laboratory of clinical pathology at the Homeopathic Hospital of the University of Michigan.



Conducted by E. KATHLEEN JONES.

Librarian McLean Hospital, Waverly, Mass.; member Institutional Libraries Committee, American Library Association.

Please address items of news and inquiries regarding Institution Libraries to the editor of this department, McLean Hospital, Waverly, Mass.

Condensed Report of the Meeting of the National Conference of Charities and Corrections, May 13, 1916, Indianapolis, Indiana.

This meeting was the first time the American Libraries Association Executive Committee on Institution Libraries has had the opportunity to make its plea before an audience composed of institution workers, but it was, emphatically, a success. We had been warned that we might have a very small audience, but in numbers and in the cordial appreciation expressed then and since the audience was a most gratifying one. Already this session has brought fruit in the shape of letters—one, for instance, from the secretary of the State Board of Control, who wishes to know what can be done to improve library conditions in that state.

The meeting was called to order by H. H. Shirer, chairman of the Public and Private Charities Committee, under whose auspices the section on libraries in institutions was conducted. After stating that the program had been arranged and the topics chosen and assigned by Miss Carey, librarian for the state institutions of Minnesota, and chairman of the American Libraries Association committee mentioned above, Mr. Shirer turned the conduct of the meeting over to Miss Carey. The chairman called attention to the fact that ten years had passed since the definite undertaking of the standardizing of libraries in state institutions, although the history of such libraries covered a much longer period. Miss Florence R. Curtis, of the University of Illinois library school, who had recently made a survey of the condition of libraries in state institutions, was the first speaker on the program and presented a report on the survey, of which the following is a summary:

This survey has been prepared from the replies to a questionnaire sent to 600 institutions supported by the national and state governments. These included 66 homes for the aged—chiefly soldiers and sailors and their wives or widows, 31 homes and hospitals for dependent children, 89 schools for the blind and the deaf, 28 sanatoriums for tuberculous and other patients, 3 institutions for inebriates, 47 for the feeble-minded and epileptic, 155 hospitals and asylums for the insane, 81 industrial and reform schools, 30 reformatories for young and first-term offenders, and 72 national and state prisons.

The returns from this study do not show that many of the state institutions have taken advantage of the help which is offered by the state library commissions and similar agencies in selecting and buying books, and in cataloging their collections. In three states a special institutional librarian is employed by the Board of Control or by the State Library Commission to give this special aid. In several states the institutional libraries

are under the care of the state library workers, or some especially broad-minded and enthusiastic city library.

Those state institutions which have had for several years advice and aid from trained workers show a decided advantage over the others in the quantity and quality of their books and the use made of them.

The second speaker of the session was Miss Edith Kathleen Jones, who, in the opinion of the chairman, had the great advantage over most institution workers of not being regarded as an "outsider," owing to her service of twelve consecutive years as librarian at McLean Hospital, Waverly, Mass. Miss Jones spoke on "The Importance of Organized Libraries in Institutions." The following is a brief abstract of her paper:

1. Importance of books and magazines for hospitals and reformatory institutions now well recognized—an additional aid in the diversional treatment of the insane and in inculcating higher ideals in reform schools and prisons. The point to be urged now is that the libraries be organized and made efficient.

2. What constitutes an efficient institution library? Obviously one having books suited to the needs of the inmates, and which gets its people interested in reading. Therefore, not the old, desultory collection of unreadable books, but a vital, progressive, central library with new material.

3. A library, to be efficient, must have three things: first, an annual appropriation, not necessarily large, for new books; second, some competent person in charge, preferably a trained librarian; third, a simple but efficient cataloging, classification, and charging system. These points have been proved.

4. Private hospitals and the larger prisons and reform schools should have their own librarians and develop individual libraries. State institutions not able to afford this can follow the example of Iowa, Minnesota, and Nebraska, and employ supervising librarians for the management of the whole group of institutions.

5. State control does not, however, mean that each institution should not have some competent person, patient or prisoner, or member of the staff, in charge under the direction of the supervisor. Such persons are necessary to get the books to the inmates and interest them in reading.

6. Emphasize again that the efficiency of a library lies not in the number of its books, but in the use made of them; this efficiency cannot, it has been proved, be attained under the old, desultory methods, but only under intelligent organization, with a trained librarian at its head.

This being Indiana's centennial year, the chairman felt that it was fitting to mention the brilliant work of the state institutions of Indiana during that period, and to call attention especially to the unostentatious but effectual institution library work which has been carried on through the Indiana Public Library Commission. Henry N. Sanborn, secretary of this commission, then spoke on "The Outlook in Indiana" as follows:

There are in Indiana 18 state institutions, including the new penal farm, 6 penal or reformatory institutions, 5 hospitals for the insane, a tuberculosis hospital, schools for the deaf, blind, and feeble-minded, a village for epileptics, etc. Every one of these, except the recently established penal farm, has what may legitimately be called a library, but it is noticeable that the penal and reformatory institutions make the library a much more important part of their institutional life than the others, with the exception of the school for the feeble-minded. The hospitals for the insane have done the least and are the least interested. Several of the penal and reform institution libraries have been organized by the Public Library Commission and are under its supervision, and in some of the others this commission has been of material assistance in the selection of books. Unless there is a trained librarian in charge of the institution library, there is generally no one on the staff who is familiar with the advantageous method of selecting and purchasing books, and there is often much wasted money and many mistakes in selection when purchasing. The Indiana Library Commission urges the necessity of trained librarians in the

institutions, and in that state three institutions employ librarians trained at the commission summer school and one other has a librarian trained at Columbia University. Besides the need of trained librarians, Mr. Sanborn urges a definite annual appropriation. That the institutions themselves are conscious of this lack of a special fund was shown during the session of the last Legislature by the introduction of a bill, emanating from one of the hospitals for the insane, making an annual appropriation of \$500 to all state institutions for the purchase of books to be selected with the help and under the supervision of the Public Library Commission. This bill was killed in committee, but it was a good sign and prophesies well for the future.

The last speaker on the program was Superintendent W. L. Kuser, of the Iowa Industrial School for Boys, whose fostering care of a fine library in a completely equipped reading room made him a speaker with a right to be regarded as an authority on the theme of "The Book and the Boy." This paper was, from beginning to end, such a fiery arraignment of much of the trash, if not worse, that our boys are allowed to get in the name of literature, such a splendid plea for the right training through the best books of the boy of today to enable him to take his place as the man of tomorrow, that it is impossible to give an abstract of it, but it will be printed later.

In the discussion which followed this meeting, Miss Templeton, secretary of the Nebraska Library Commission, urged again the budget or appropriation system for the institution libraries. In Nebraska it has proved economical and efficient. In the boys' industrial school of that state, which has 180 boys, the commission has spent only from \$100 to \$150 a year on their library, but in five years has been able to build up a good library of between 700 and 800 books. In their orthopedic hospital, with 150 children, they have over 1,100 books—the very cream of children's books—yet are spending only \$150 a year on it. The Nebraska Legislature makes a special appropriation for books in institutions—\$1,800 a year for 13 institutions, with a population of about 4,000 people. Miss Templeton added, "\$1,800 does not seem a great deal, but by spending \$1,800 last year and the year before, this year and the next, we are going to have an adequate collection of books, and, since we have a special librarian to expend that money, the libraries will be real, workable libraries, without any dead lumber on the shelves."

Mr. Shirer, of the Board of State Charities in Ohio, showed advance copies of a list of books which this board had asked a librarian connected with the children's department of the Cincinnati public library to compile for them, under the title, "A Children's Home Library. Suggestions for Ohio Child-Caring Institutions. Prepared by Mary Rudd Cochran." This very complete little list can be obtained on application to the Board of State Charities, Columbus, Ohio.

In connection with children's hospitals and homes, Miss Elizabeth MacGregor, superintendent of the Hospital for Crippled Children, St. Paul, Minn., said that the children in her hospital have regular hours for story-telling by the librarian. Pictures of the charming reading room in this hospital were shown by Miss Carey.

The need of libraries in the South, not only in the institutions, but among the colored population, was brought to our notice by two speakers. While the latter question is outside our province as institution librarians, we are glad to call the attention of our southern readers to this need.

Ending the discussion, which was brought to a close only because of the time limit, Miss Scott, organizer of

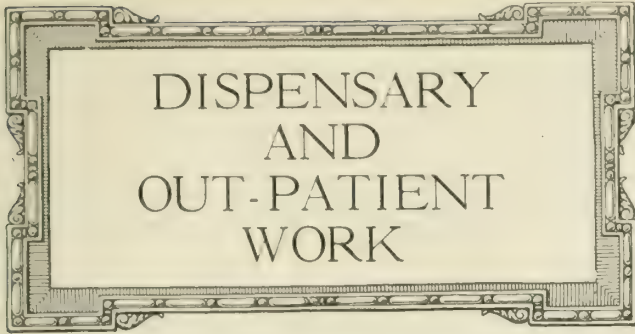
the Indiana Library Commission, spoke of the manual which has been prepared under her supervision and will soon be published by the American Libraries Association Publishing Board, 78 East Washington street, Chicago. This manual endeavors to answer the following questions, which the untrained institution library worker always asks: (1) What books shall I select? (2) How shall I arrange them? (3) How shall I keep track of them? (4) How shall I get them to the readers? (5) How shall I keep them in good condition?

This manual presents the standard methods of library science as they have been adapted to conditions in institutions. All explanations are as simple as possible, so that the inexperienced librarian will be able to organize her library intelligently. The following are some of the headings: book selection and purchase; administration; furniture and equipment; periodicals, their selection and care.

What the institution librarians gathered from this meeting—from talking with other institution workers, from visiting public and hospital libraries and library schools on the way to and from Indianapolis—was that everyone who has had anything to do with institution libraries is impressed with the necessity of having a trained librarian in charge either of each institution library or of the state institutions, and of having an annual appropriation, however small, for the purchase of new books. It was the general impression that the state hospitals for the insane are the most backward of all institutions in accepting aid or suggestions from the librarians. Not once, or twice, but many times was I told of this condition, and asked why this was so, and why, if a state hospital does try to better its library conditions, it almost invariably puts in some member of the staff without library training instead of the much more economical because more efficient trained librarian? This state of affairs has also impressed me since the inauguration of this page in *THE MODERN HOSPITAL*. I have had many letters from state and general hospitals about developing libraries, but it must be confessed that in most cases the general hospitals have been more interested in doing the best thing and doing it well. I am inclined to believe that the reason the state hospitals have the name of being unprogressive, and even prejudiced against outside suggestion, lies in the fact that they have neither the funds nor the liberty to dispose of what funds they have, while the general hospitals are usually private affairs, heavily endowed. Does this prove that government or state ownership is the death blow to individualism, enterprise, and progressiveness?

A hospital for the National Special Aid Society, whose headquarters are at 259 Fifth avenue, New York city, is being built by Mrs. Arden Duane Doty on her husband's plantation near Macclenny, Fla. The National Special Aid Society was organized last year for the purpose of creating a volunteer corps of women for service to the country in time of need. Among its activities is the conducting of classes for the instruction of women in first aid and hygiene and in food preparation and values. The society has gone further than this, however, and proposes to do what it can toward caring for overworked women and girls who, failing in health, need rest and medical treatment.

Miss Elizabeth Jamieson, formerly an assistant in the training school of the Massachusetts General Hospital, Boston, and for a time connected with the Lakeside Hospital, Cleveland, Ohio, and St. Francis Hospital, San Francisco, was installed last month as superintendent of the Cottage Hospital of Santa Barbara, Cal.



Conducted by MICHAEL M. DAVIS, Jr.,
Director of the Boston Dispensary.

Please address items of news and inquiries regarding Dispensary and Out-Patient Work to the editor of this department, 25 Bennett street, Boston, Mass.

Progress at the Hartford Dispensary

In the capital city of Connecticut the Hartford dispensary has just completed its forty-fifth year, and is celebrating the event by entering a greatly improved and enlarged building. The growth of this institution is shown by the fact that, while in 1913 all its clinics together received less than 6,000 visits, in the single month of January, 1916, almost 12,000 visits were received. This rapid growth has necessitated an enlargement of quarters, so that, while only one floor of the building was utilized until 1916, the entire building of two stories is now utilized by the dispensary. The structure has been refinished and new equipment has been installed.

This dispensary represents one of the growing number in middle-sized communities which is advancing in service to meet the broadening conception of the duties of a medical institution. A report issued on the occasion of this entrance into the larger quarters explains the organization. The medical staff is organized coherently under the direction of a physician-in-chief, and a nurse, a registrar, and a number of volunteer workers are engaged in the daily clinics. One of the most marked advances has been in the fifteen months when a trained social worker has been attached to the dispensary. This social service worker not only interviews all new patients, but investigates the financial status of patients and the conditions of the homes. The trained nurse is engaged for full time, to be in attendance during clinic hours, to do follow-up work, and to care for some patients in their homes. The registrar admits the patients, and has charge of records and files.

This dispensary, says the report, is "a purely private charity, receiving no funds from the state or city, and being entirely dependent for its support on voluntary contributions. Its policy is not to treat large numbers of cases in a superficial way, but rather to do intensive work along certain lines, with a thorough system of follow-up. Its aim is to cure disease, and not merely to relieve the suffering caused by it, to detect disease in its incipient stages, and to prevent disease by teaching mothers how to care for their children."

Dispensaries in the Southern States

The growth of dispensaries in our southern states is comparatively recent, as in the census of 1910 only thirty dispensaries, most of them quite small, were reported in the ten states south of Maryland and east of the Mississippi. But the improvement of education in the South has during the last few years led naturally to the establishment of new dispensaries and to progress in already existing institutions; while, moreover, the charitable spirit

and quickened public health activities in several southern communities have lately led to the development of new institutions, notably those started at the instigation of the Associated Charities of Memphis, Tenn.

The attention of dispensary superintendents may well be drawn to the report of the dispensary of the Medical College of Virginia, published in the bulletin of the college dated September, 1915, but only just now circulated. Largely at the instigation of Dr. James A. Smith, whose suggestive article on the "Importance of Dispensaries" is partly quoted, this dispensary of the Medical College of Virginia has been substantially improved in recent years, and may well serve to stimulate further development in the South.¹

THE DISPENSARY AS A MUNICIPAL HEALTH AGENCY²

Patients applying for treatment at a general dispensary may be roughly grouped into four classes:

1. Those with simple ailments or accidents that can be satisfactorily treated on the floor of the dispensary.
2. Those needing hospital care.
3. Those who need the services of a nurse at home to carry out the treatment prescribed in the dispensary or for the protection of the family and neighbors.
4. Those whose physical disease is complicated by the pressure of social conditions.

First. The group requiring no attention outside of the dispensary. By far the largest number come in this class, and it was in dealing with them that the dispensary first proved its right to exist. Many of them, of course, would get well without any treatment; but so it is in private practice. Many others are saved from serious illness by timely attention. Prevention of infection in wounds and the rational treatment of wounds already infected saves much time to the laborer and his employer. Urethritis in the male is well adapted to dispensary treatment, and any educational campaign in venereal conditions can find in the dispensary the pupils it should reach, and in as impressionable a state of mind as can be hoped for. The application of casts for orthopedic conditions, much of the work on the eye, ear, nose, and throat, the oversight of the pregnant woman—this is the class of work in which the expenditure of 20 cents per visit yields good returns.

Second. The patient coming to the dispensary and found to need hospital attention. This group represents approximately 5 percent of the cases applying to a general dispensary for treatment. So it is quite necessary that the dispensary shall be affiliated with a hospital prepared to care for indigent patients. Often the ideal arrangement is that the dispensary shall constitute the out-patient department of the hospital. In communities where no municipal hospital exists, provision is often made by the municipality for privately owned institutions to care for a limited number of patients. While hospitals were few, dispensaries were limited to large cities. But as surgery filtered through its metropolitan bounds, and took surgeons to towns instead of forcing townspeople to come to surgeons, hospitals multiplied and extended until now every town of 10,000 inhabitants claims a hospital of its own. In the wake of the in-patient hospital is coming the out-patient department as a factor in the maintenance of the public health. The dispensary needs the hospital to care for certain patients; the public hospital needs the out-patient department to care for people who would otherwise entail unnecessary expense for hospital beds. The dispensary can serve the hospital by holding in the ambulatory class people who will do as well treated in this way; and by taking over ex-patients from the hospital, safely discharged at an earlier date because of the facilities afforded by the dispensary.

Third. The group requiring nursing attention at home. In dealing with this and the fourth class of patients, the free dispensaries of the country are keeping pace with the progress of the day. Time will not permit an extended discussion of the field of the visiting nurse in co-operation with the dispensary. In infantile feeding, in-

¹Copies may be obtained by writing Dr. James A. Smith, superintendent Medical College of Virginia, Richmond, Va.

²Portions of an article by Dr. James A. Smith, Richmond, Va., read at the meeting of the Medical Association of the Carolinas and Virginia, February 16, 1916.

fantile diarrhea, parasitic conditions, skin lesions, the re-education of the muscles of orthopedic cases, and in many other conditions she can make effective the treatment prescribed by the dispensary staff. Going directly to the home of the patient, she ministers to his personal needs; if he is a source of danger to the public, the role of educator is added to the functions of the nurse. No class of cases illustrates the possibilities of cooperation between the dispensary and the visiting nurse better than the tuberculous. Dr. Hamman, in speaking of tuberculosis before the Medical Society of Virginia, said:

"The dispensary is the central point of attack, the clearing house of all other antituberculous activities. It is the station where the tuberculous are discovered, and the fears of those not infected are confidently dispelled. It is the doorway of sanatoriums, hospitals, and other institutions."

That the dispensary can be made in fact the control point of attack, I think I can show.

The first consideration in combating tuberculosis is to know, individually, who the victims are and where they are located. In the cities of the South three-fourths of the tuberculous cases are among the negroes; 75 percent of the attendance of the dispensary of the Medical College of Virginia is colored. During the past two years approximately 7,500 colored persons have visited this dispensary. There are 40,000 colored people in Richmond, and one out of every six of the whole colored population, sick and well, is registered there. Naturally the enrollment represents a much larger proportion of those chronically sick. I think it is safe to say that probably one-half of the tuberculous negroes in Richmond having the disease in communicable form and exclusive of the bedridden, have within two years registered their names and addresses in the general dispensary.

What is true of tuberculosis is in some measure true of syphilis. The dispensary is destined to play a leading part in the fight yet to be made against this disease.

A NOTABLE AND UNIQUE CHARITY

The Wheel Chair That is Growing Into a Fine Hospital

The Wheel Chair Home for Incurables of Buffalo, New York, has been moved from 344 Hudson street to the handsome brown stone residence, 2746 Delaware avenue, corner of Kenmore avenue. When the Wheel Chair Home was organized, five years ago, a band of earnest women came together with the idea of devoting themselves to the shut-ins and chronic invalids of our city by purchasing wheel chairs and loaning them to invalids among the poor.

Although a young organization, the demand for the room capacity of the home has been so great that a long waiting list has been a necessity, and the new home, which is larger and better adapted to the purpose, enables many more patients to be cared for. It is a great responsibility, but the pitiful cases of suffering spur the workers on in this great and good work.

A staff of physicians and nurses is in attendance at the home, which is undenominational, and nothing is left undone that would add in any way to the comfort and happiness of the people who make this their home, and a spirit of content, in spite of the pain and suffering that prevail, is a reward to all whose efforts make this work possible.

No paid officers are connected with the association. All donations that are received are used absolutely for the comfort of the invalids and needs of the home. Mrs. David F. Williamson is president; Mrs. Irving E. Devereaux, vice-president; Mrs. George E. Pierce, recording secretary; Mrs. Norman Edsal, corresponding secretary; Mrs. W. C. Grove, treasurer. The directors are Mrs. D. F. Williamson, Mrs. George Austin, Mrs. E. A. Chandler, Mrs. Blake P. Fraser, Mrs. I. Devereaux. The advisory board consists of George K. Staples, Elmer E. Chandler, George E. Pierce, Blake D. Fraser, Edward Fairbairn, and William F. MacGlashan.



THE MODERN SANATORIUM

Conducted by ALBERT WARREN FERRIS, A.M., M.D.,
Saratoga Springs, New York.

Please address items of news and inquiries regarding The Modern Sanatorium to the editor of this department, Saratoga Springs, New York.

The Physical Examination

The thoroughness of the examination is properly taken as an index of the interest and the efficiency of the physician. There are some exceptional clinicians who can with marvelous facility arrive at a close general diagnosis from observation of the gait, attitude, muscular condition, color, skin condition, hair condition, voice, expression, attentiveness, and facies of the patient as he enters the congregating room and takes his seat to await his turn. But while this was safe for that "canny Scot," Dr. Bell, who furnished Dr. Conan Doyle his prototype for Sherlock Holmes, it is unsafe for everyone else as a complete basis for diagnosis. Dr. Bell would undoubtedly wave his hand tolerantly, and say, "Elementary, perfectly elementary, my dear Watson;" but the rest of us need a careful, systematic, critical, routine examination, followed by a grouping of facts into a summary, in order to secure a reliable picture for our future study and action.

It is easiest to have a plank printed, leaving spaces for recording the results of examination of each region or organ, and to adopt a special method of dictating to the nurse, in order that the patient may not be annoyed or alarmed through thoroughly understanding for what possibilities search is being made or what conditions are found. It is best that the doctor's language in dictating to the nurse be unintelligible.

The chart, on which has been written the name of the patient and the date, is taken by the physician, who notes silently the *general appearance* of the patient. Under this head he states the nutritional condition, the color, expression, the nervous attitude, the presence of tremor, etc. He also notes the color and condition of *hair, skin, and nails*, leaving the other subdivision of the integumentary system, comprising the *teeth*, until the buccal cavity is explored. He notes the *apparent age* before asking the real age. Handing the chart to the nurse, the physician then dictates to her the condition of the *pupils* as to quality, regularity of outline, as well as to pigmentation of the iris and presence of *arcus or corona senilis*; also as to *reaction of pupil* for light and to effort to accommodation for distance. The color and vascularity of the *sclera* and of the palpebral *conjunctiva* are then dictated. Next comes the open mouth, the *tongue* receiving first attention, whether protruded straight, if tremulous, if coated, its color, and if toothmarked. Quickly the *mucous membrane* of the mouth is examined, also enlargement of *tonsils*, the color and condition of the *pharynx*, a sterilized wooden tongue depressor being daintily selected from a closed glass jar and destroyed after using in the presence of the patient. The *breath* odor is noted in passing. Next the *chest* is

examined as to shape, capacity, symmetry, and expansion, the cervical and thoracic *spine* receiving careful attention as to curves and tenderness. The *costal angle* is noted. If the patient be a man, a tape is thrown about the chest and the best obtainable figures for forced *inspiration* and *expiration* are dictated and recorded in inches or centimeters. Inspection, palpation, auscultation, and percussion reveal the condition of the *bronchi and lungs*, all rales and pathological signs being discovered and noted.

Next the *heart* receives attention. The point of maximum impulse is marked with soft pencil, and recorded as *P. M. I.* if found. By careful and accurate percussion are located and marked the *upper border, lower border, right border, and left border* of the heart, the two former being identified by the ribs or interspaces, the two latter by measurement in inches from the median line of the body. The heart is roughly drawn on the chest, and the *oblique diameter* measured with the tape. Use of the stethoscope is invoked to ascertain the presence of murmurs, to determine the muscular quality of the viscus, and to determine the comparative volume of the pulmonary diastolic and the aortic diastolic sounds, and the presence of pathological pericardial as well as endocardial conditions.

Up to this time the male patient has been standing. The female patient is best examined recumbent. Almost all the rest of the investigation requires the *dorsal decubitus*. The *abdomen* next claims attention, and its *circumference* is ascertained with a tape. A double fold of the abdominal fat is then pinched up, and this is regarded as the abdominal wall, being estimated and recorded in inches or centimeters. The whole abdominal cavity is then explored for masses or tenderness, and displacements of the viscera are noted as far as possible. *Lymphnodes*, in the triangles of the neck, the abdominal cavity, or in the axillæ, are then recorded. The *liver* is percussed, and its *upper border and lower border* noted—the former in relation to the numbered rib, the latter in relation to the costal margin—and the *vertical diameter* measured with the tape; its character of surface, edge, and sensitiveness are noted. The *spleen* is similarly noted as to position, if found at all. The *right kidney* is palpable in about one in four cases; the amount of palpable surface and the presence of tenderness are recorded. The *left kidney* receives parallel attention. The *stomach* is located by the scratch method, the *lesser curvature* being recorded in relation to the ribs and the *greater curvature* in relation to the umbilicus. Its *vertical diameter* is then ascertained by the tape. *Tympany* is determined by percussion, and may or may not coincide with the results by the "scratch method."

The *blood pressure* is taken with the band over the left arm, the patient recumbent. The physician places his stethoscope over the artery at the flexure of the elbow, and notes the five phases, the first of which is the systolic and the last the diastolic. The *mean pressure* and the *pulse pressure* are calculated and recorded. The pulse, patient recumbent, is then noted, or at any time when the patient has become accustomed to the examination and is not intent on any part of it. The *pulse rate*, patient standing, is also recorded; and in each case, lying and standing, the rapidity, regularity, character, strength, and volume are noted. Three *arteries* are explored—the radial, brachial, and temporal—and their condition as to palpability and actual thickening are recorded. The *height* is ascertained, by means of a graduated rod or marked lintel, immediately after taking the *weight*, if the

weight is not to be taken regularly weekly, in the bath or other treatment room. The weight should be ascertained at the same hour of the day on each occasion, and with the same reference to the meal nearest that time of day. Further examination depends on the history. Under *remarks* the condition of the thyroid, the presence of pretibial edema, etc., are chronicled.

The physician then makes out his *summary* from the chart, thus completed, and is ready to decide the treatment of the patient, viewing this summary in the light of the history and the clinical record of the past.

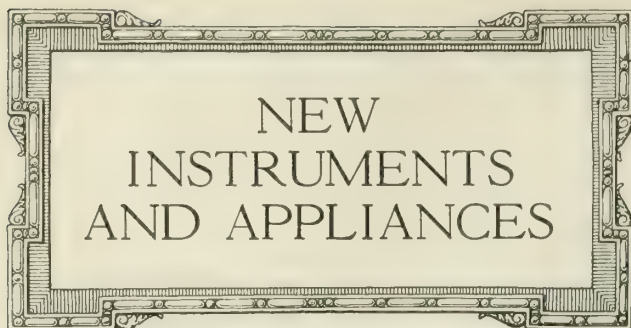
Besides the foregoing a painstaking and careful watchfulness should be maintained for tissue that may provide an encouraging nidus for the development of cancer. This further investigation is imperative in view of the large and increasing number of cases of carcinoma in the entire country. Statistics reveal the facts that several hundred thousand deaths are annually due to this dread disease; and that of all men who live to be 35 years of age, one in every eleven has cancer; while of all women who survive to the same age, one in every seven has cancer. Pigmented warts, fissures that remain unhealed, knobs, knots, "bunches," and all collections of tissue that may be called "precancerous," should be viewed with suspicion and marked for removal. A recent article in a medical journal drew attention to the fact that warts and indurations on the necks of women, where dandruff fell more or less frequently, developed into carcinomata in many cases studied; and the question was raised as to the agency of seborrhea or furfuracea in causing such metamorphosis of tissue in the warts. This, for us, is beside the mark. It seems to be our duty to search for and remove such warts and indurations, and then let the dandruff fall where it will. The complete surrender of responsibility to the sanatorium physician, and the complete reliance on him for a comprehensive and exhaustive diagnosis, renders it part of his duty to discover, so far as is possible, dangerous conditions or conditions that have danger potentialities, and give the patient the benefit of warning and sound advice concerning all morbid agencies that are operating.

The examination thus outlined consumes a half hour in the case of a man and forty minutes in the case of a woman under ordinary circumstances. Feebleness or easy fatigue may necessitate setting apart more time for it.

A neurological case will require at least an hour, and an extended survey of different character will be requisite.

ALBERT WARREN FERRIS.

The managers of Robin's Nest, the country home for convalescent children at Tarrytown, New York, celebrated their twenty-fifth anniversary of the establishment of the home on the afternoon of June 1. The institution is renowned for its excellent facilities for caring for convalescent children and the interest displayed by the fashionable set of New York in their support of this charity. The Nest, as it is generally known, has always been under the control of a ladies' board of trustees and their management has shown most efficient business ability. On this anniversary opening the managers gave a lawn fete on the grounds of the Nest, and New York and Tarrytown society showed their interest by attending in great numbers. Mr. Oliver H. Bartine, superintendent of the New York Society for the Relief of the Ruptured and Crippled, delivered an address, dwelling on the success of the institution and at some length on philanthropy in general as applied to their work. The children in the Nest, although deformed and drawn from New York's poor, are particularly happy and an unusually bright-looking set of children, and quite a contrast to children of the same type seen in their own homes. Mrs. Homer Foot, Jr., is president of the institution.



VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor.

Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

A New Obesity Apparatus

Electrical treatment for the reduction of fatty tissue has gained considerable popularity since the work of Bergonie was published. Various types of apparatus have been designed, one of which, of European manufacture, was described in these columns. Very recently another equipment has been placed on the market by an American maker of electro-medical apparatus, and, as many features in construction have been added, and also as this ap-

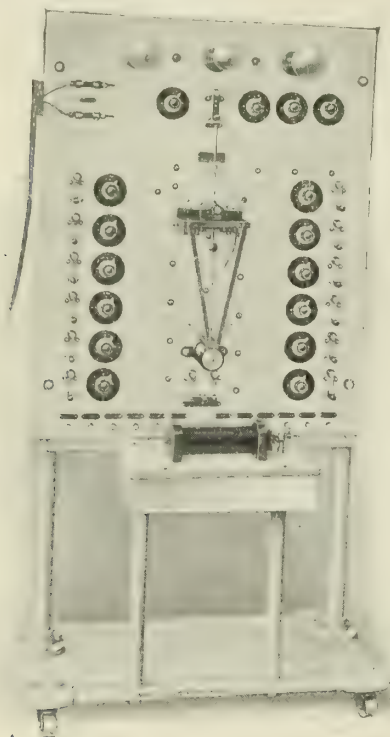


Fig. 1. Electric apparatus for the Bergonie treatment.

paratus has a most important place in the equipment of the modern sanatorium, we believe it demands attention of sanatorium workers.

The switches, rheostats, rheotome, resistance lamps, etc., are mounted on a white marble slab $\frac{3}{8}$ inch thick, 30 inches wide, and 38 inches high; the latter, in turn, is mounted on a white enameled solid iron floor-stand, with roller casters. A faradic coil and a precision interrupter are mounted on a separate slab at right angles to the base of the larger slab, and incased under the slab are large capacity condensers to prevent arcing at the point of contact.

The primary of the coil has a separate control rheostat for regulating the rapidity of interruptions and increasing or decreasing the amount of current passing through it. For the pole-changer and rhythmic interruptions, an electro-magnetic clock or rheotome is used. The "make-and-break" current is controlled by a mercury dip. This device can be run all day without heating.

Below the rheostat is mounted a DeWatteville switch. With this device it is possible to make and break the current on the positive and negative poles, on the positive pole alone, or on the negative pole alone, or the switch may be set so that a continuous faradic current can be obtained. Twelve rheostats and switches are used for the

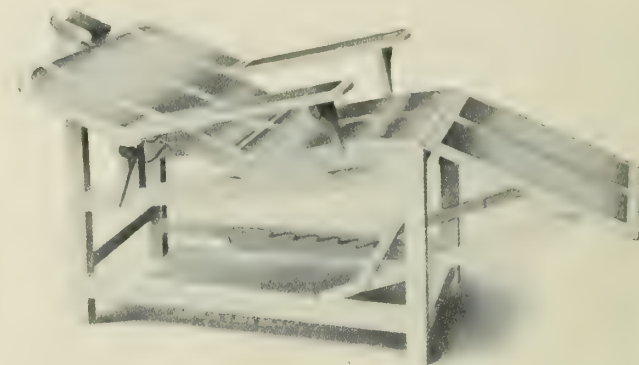


Fig. 2. Chair couch for the Bergonie treatment.

purpose of controlling the current for the different electrodes which are attached to the body. If, for instance, more current is to be used for the abdomen, the corresponding rheostat is turned to the higher number to decrease the interposing resistance. If less current is to be used on the thighs, the resistance is increased at the will of the operator and for the comfort of the patient. In other words, the current strength of each set of electrodes can be regulated so that a uniform contraction is produced.

The whole apparatus is so constructed that it will do the work with precision and accuracy. The illustrations show the complete apparatus in detail, and also the special chair couch, which is necessary in giving the Bergonie treatment.

Simplified Apparatus for Blood Transfusion

DEvised BY DR. H. W. ABELMANN, Chicago.

Since blood transfusion has passed the stage of being looked on as a procedure to be employed only as a last resort in order to save human life, after everything else has failed, and since it is now frequently performed for the purpose of curing certain diseases, such as simple and pernicious anemia, leukemia, goiter, rheumatism, tuberculosis, chronic infections, etc., an endless variety of apparatus has been devised for this operation.

It must be quite a problem for the surgeon who intends to equip himself with the necessary instruments for this work to make a selection, inasmuch as every one of the devices is considered the most satisfactory by their respective inventors. It is a fact, however, that some of them are rather complex and difficult to use, and others, although apparently of very simple construction, necessitate the possession of great mechanical dexterity on the part of the operator, and such dexterity can be acquired only either by experimenting in the dissecting room or in actual work by the surgeons at the larger hospitals, where many of these cases come for treatment.

The apparatus devised by Dr. Abelman and the

method employed was described in the *Journal of the American Medical Association* some time ago, but since then both apparatus and technic have been further simplified and have been used in many successful operations. On account of its simplicity, and therefore easy method of employment, the writer decided to bring both apparatus and technic to the attention of the readers of this journal.

The apparatus consists of a metal box containing the syringes, transfusion needle, and solution cup (A). The

ber tube, and this flexible connection between needle and syringe permits the syringe to be held at the most convenient angle, thus minimizing the possibility of traumatizing the vein (Fig. 3).

The syringe is sterilized, and petrolatum (heated to the liquid state) is taken up through the needle in order to coat the inner surface of the syringe and plunger. This coating facilitates the easy sliding of the plunger, and renders both barrel and plunger air tight. After the syringe has been prepared in this manner, it is filled with 5 cc. of a 5-percent sodium citrate in 85-percent sodium chlorid solution, which excludes air from the lumen of the needle and syringe. The petrolatum coating and solution prevent the coagulation of blood.

The flexor surface at the bend of the elbow is sponged with 95-percent alcohol, and a tourniquet is placed around the arm in order to distend the veins. The transfusion needle is then inserted into the donor's most prominent veins, and as soon as the barrel is filled with blood the tourniquet is removed and the needle withdrawn; 5 cc. of the solution are then drawn up, the syringe laid on the tray (Fig. 2), and the needle removed.

An all-glass hypodermic syringe, fitted with a trans-

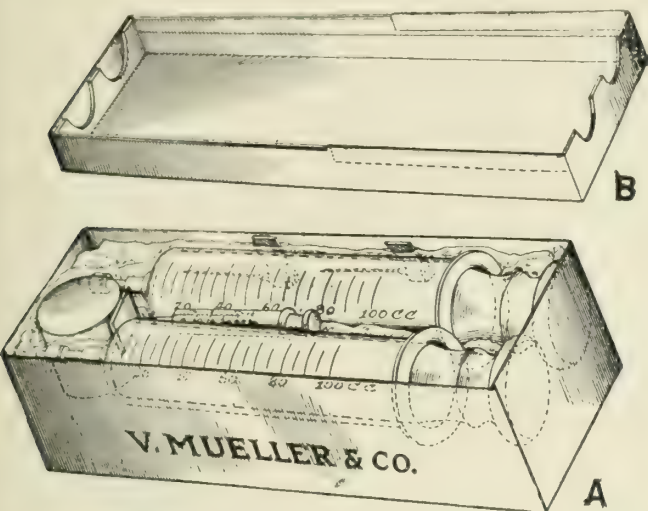


Fig. 1. A, metal box, with syringes and accessories packed for transportation; B, extension cover of metal box.

size of the box, when closed and containing all the necessary apparatus, is $9\frac{3}{4}$ inches long, 4 inches wide, and $2\frac{3}{4}$ inches high, and sufficiently compact to be carried in a coat pocket. The extension cover of the metal box (B) is utilized as a syringe tray, its stationary racks accommodating two 100-cc. all-glass injection syringes, one 2-cc. all-glass hypodermic syringe, and metal clips for keeping the needles and solution cup in fixed position. These racks prevent the syringes from rolling, thus avoiding breakage, and also serve in keeping the transfusion needles and pistons in a sterilized field. The racks further prevent the plungers from sliding, which obviates the inadvertent dripping of blood or the entrance of air into the syringe.

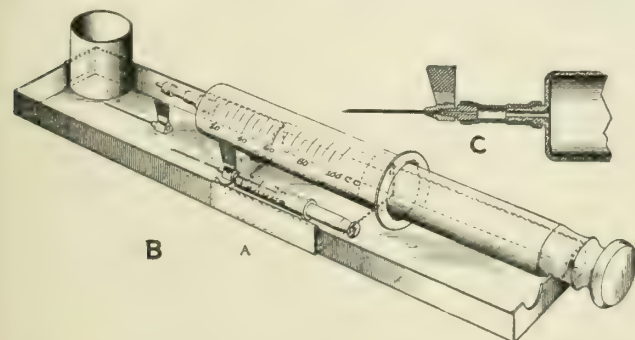


Fig. 2. B, extension cover of metal box utilized as a syringe tray; C, needle.

The extended portion of the cover can serve as a dripping pan, and is telescopically engaged with the remainder of the tray.

The transfusion needles have slip joints and are interchangeable. They are provided with a guide, which serves to indicate the correct position of the cutting edge of the needle and as a handle which gives ease and control to the operation, as well as preventing contamination of the needle. The needle is attached to the syringe by a rub-



Fig. 3. Illustrating method of procedure.

fusion needle and filled with 10 m. of the solution, is taken and the needle is thrust into the most prominent vein of the recipient. As soon as the needle enters the vein, blood pressure pushes the plunger outward, giving proof to the operator that the needle is in the lumen of the vein. The tourniquet is now quickly removed and the contents of the hypodermic syringe emptied into the vein. The hypodermic syringe is then disengaged, and the large syringe, filled with blood, is connected and its contents injected into the recipient's vein. If more than 100 cc. of blood are to be transferred, the needle is left in the vein until two or three syringefuls of blood are secured from the donor, which are placed into the sterile tray and injected in turn into the vein of the recipient.

Dr. Abelmann states that the employment of this method is practically painless and does not require either local or general anesthesia, and can be done without the aid of trained assistants. The method eliminates the employment of cutting, suturing, or tying operations, and precludes the possibility of transmitting disease from the patient to the donor, as the blood of the patient at no time comes in contact with the donor during the performance of the transfusion.

New X-Ray Apparatus

With the ever-increasing value of x-ray diagnosis at the bedside, as well as in the laboratory, the development of a genuine, practical interrupterless x-ray transformer, having capacity to give a sufficiently wide range of service, and yet of such design that it may be readily disassembled and placed in the ordinary automobile or other small vehicle for transportation to the bedside in the pa-



Victor "Multum Im Parvo" interrupterless x-ray transformer.

tient's home, is of more than passing interest to the medical and surgical profession. Such an apparatus, which its makers have named "Multum Im Parvo," has recently been placed on the market. That this apparatus is far in advance of the portable high-frequency x-ray coil is evidenced by the fact that numerous clinical tests have shown it to have sufficient capacity to give perfectly satisfactory radiographic service in all bone lesions, including the head, pelvis, in locating foreign bodies, and complete fluoroscopic service in accordance with modern technic, which includes the examination of the complete alimentary tract. For treatment work this transformer will give complete service so far as superficial lesions are concerned and a limited amount of service in deep therapy.

The apparatus, while occupying a floor space of only 20 by 21 inches, is a practical and impressive looking outfit, but is so designed that it is quickly and easily disassembled without the use of a single screw, spring dowels being used for automatically making the mechanical and electrical connections between the units. When used for outside work the lower unit may be dispensed with, as its sole function is to elevate the apparatus to a convenient working level, and it may be used for storage purposes, as the front panel is hinged. At the present time this apparatus is arranged for alternating current only.

Physicians and surgeons who have given up the idea of installing an x-ray equipment on account of limited space will be well repaid for investigating this new interrupterless x-ray transformer.

New Container for Surgical Suture Material

With the advent some years ago of the hermetically sealed glass tube with a label inclosed, the problem of surgical safety as regards suture material was solved, provided, of course, that the fundamental rules of bacteriological determination for sterility of ligatures and sutures had been carefully observed before the impregnation with an antiseptic was attempted.

To Mr. B. K. Hollister, of Chicago, we believe, belongs the honor of introducing the now so well-known sealed glass ligature tube, which has become exceedingly popular, and since it first appeared has been adopted by most of the leading manufacturers of suture material. In order to meet the demand for less bulk and weight, Mr. Hollister recently introduced a new package which is known under the trade name of "Ovltubes," and for these

new tubes he claims a general greater operating room convenience. The oval shape reduces packing bulk by nearly one-half, while the tubes break readily at the mark with a sharp, clean fracture, cannot roll, and the contents are positively guaranteed against deterioration until used, and no reasonable limit is placed on the number of times that they may be boiled with the instruments at the time of operative preparation.

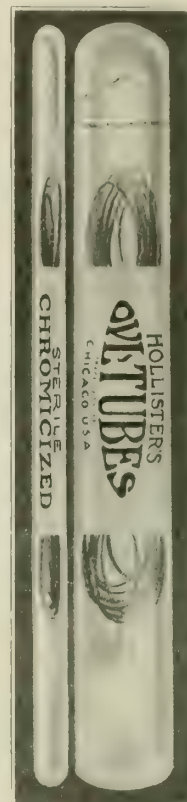
The catgut is confined in a natural coil, cannot twist, and where threaded, as in an emergency tube, the curved needle lies free and cannot develop a blunted point through pressure contact with the tube wall, as so often happened with the old-style container.

The following sutures and ligatures are being offered, packed and sealed in the new flat container in sizes 00, 0, 1, 2, 3, and 4: pyoktanin catgut, chromic catgut, and iodized catgut P-M-I. Other sutures and ligatures packed in the same way are silkworm gut, both white and iron dyed, horsehair sutures, and umbilical tape.

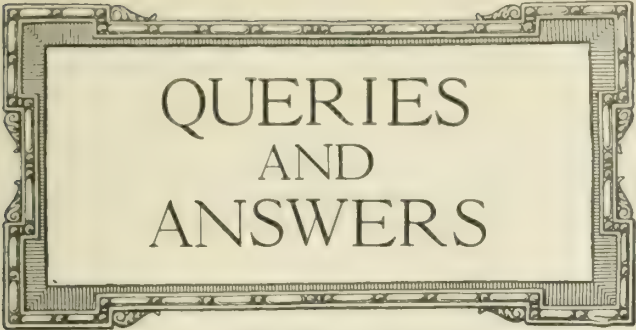
Today it is well understood that the preparation of this class of surgical requirements should be a scientific work, the success of which can be assured only when those engaged in the preparation are possessed of the aseptic conscience and a great sense of their responsibility. As Mr. Hollister has had many years' experience in the preparation of surgical suture material, and possesses an organization whose efficiency has been thoroughly tested, we have no hesitancy in urging the surgeon who realizes the supreme importance of his operative work to give the material contained in these ovltubes a trial the next time he feels that he should make a change in the use of his suture material.

In an effort to determine whether the nurses, stewards, and ambulance drivers of the emergency hospital service of San Francisco were entitled to one day off in seven, as petitioned to the Board of Supervisors, Charles A. Nelson, a member of the board, recently visited the five emergency hospitals of the city incognito. At each hospital, his identity being unknown, he appeared shabbily dressed and applied for treatment for some imaginary ailment, and while being examined by the surgeon on duty he watched what was going on and the treatment accorded others. In each instance Supervisor Nelson's own trouble was diagnosed as merely one of "I won't work," and he completed his tour so well pleased with what he saw that he wrote a letter to the employees' committee assuring them of his support.

At the twelfth annual meeting of the Michigan State Nurses' Association, held in Kalamazoo May 23-25, officers for the ensuing year were elected as follows: President, Ida M. Barrett, R. N., Grand Rapids; vice-presidents, Fantine Pemberton, R. N., Ann Arbor, and Mrs. Martin M. Foley, Detroit; recording secretary, Christine Hendrie, R. N., Grand Rapids; corresponding secretary, Anna M. Schill, R. N., Flint; treasurer, Katherine Hart, R. N., Petoskey; councilors, Mrs. Lystra E. Gretter, R. N., Detroit, and Sarah E. Sly, R. N., Birmingham.



Hollister's new suture container.



QUERIES AND ANSWERS

Who Furnishes the Gloves?

To the Editor of THE MODERN HOSPITAL:

Our state university makes use of our free wards for clinical purposes, and consequently uses an enormous amount of rubber gloves, which the hospital furnishes gratis. You, with your wide hospital experience, can tell us if this is customary. We furnish all the gloves our surgeons require for private and clinical cases.

We have a hospital of 110 beds, of which 46 percent are charity cases. Pardon me for taking your time, but I have read a number of articles in THE MODERN HOSPITAL, and value its opinion very highly.

One more question: do surgeons use gloves after they are mended.

OHIO.

You are probably in for it in the matter of furnishing rubber gloves to the surgeons in your hospital. Unless the conditions in the university medical school are peculiar to your institution, you might be able to persuade the faculty to pay for the gloves, but in all probability they will come back at you with the proposition that they are giving free medical and surgical service to the hospital, and that it is as little as the institution could do to furnish them the garments and the material with which to work. Most of us who have had a good deal of experience rather insist that the institution shall furnish the rubber gloves, catgut, and operating garments. Experience has taught that when we do this we get a greater uniformity in the materials used in the hospital, and thus assure for our institution an even, smooth-working technic; but we certainly would not feel obligated to give the surgeons unmended gloves always and for every operation. Of course, the claim that the surgeons make is that mended gloves may have tiny hiding places for micro-organisms—all of which is pure nonsense, because, if a glove is sterilized, all of it is sterilized, whether it be mended or not; and if it is not sterilized, it ought not to be used, whether it is new or mended. In order to be quite sure on this point, and in order that you may convince your surgeons of the safety and reasonableness of your attitude, you should be extremely careful in the matter of your sterilization. You are probably using either low-pressure steam or hot water to sterilize your gloves, because dry heat not only destroys gloves rather quickly, but it requires a very high temperature to be sure of perfect sterilization.

Administrative Medical Staff Problems

To the Editor of THE MODERN HOSPITAL:

As a subscriber of your journal, I would like to have your opinion on the following matters:

The professional services in our institution are arranged in such a manner that each surgeon and medical man receives four months of service—two months male and two months female. It is my opinion that this is a very poor arrangement—as I believe in changing services three times a year—that our patients do not receive the proper attention, and that our staff is very little benefited by the division of the work. I would recommend a con-

tinuity of service for all connected with the hospital—medical and surgical men included.

The interns of our hospital are taking care of the dispensary service, which in my opinion should be done by members of the visiting staff.

I intend to bring these two questions to the board of managers, but before doing so want to be sure of my ground, and ask you to kindly discuss these matters in the columns of your magazine.

I thank you in advance for your kind assistance and courtesy.

F. C. HILKER,

Superintendent Pottsville Hospital, Pottsville, Pa.

There is no doubt as to the correctness of your views in regard to the split services of the medical staff in your hospital. The practice of dividing the services by months, giving each man two or three or four months' service, has become obsolete—for two reasons: first, because, as you say, the patient does not get a square deal; just as his physician begins to understand the case perhaps, and he is equipped to benefit him, there is a change and a new doctor comes on service. We all know that medical men do not take each other's diagnoses for granted; each man wants to make his own diagnosis. One can easily see that in complicated, long-drawn-out cases the repeated change of medical men would do the greatest possible amount of harm to the patient. The second reason why this practice is becoming obsolete is that short services are of little value to medical men. About the time that they get really interested in their service, and about the time that they have mapped out a course of research work and study, they are out again. After one or two attempts, men give up attempting to do serious work, and the hospital suffers very greatly.

By all means persuade your board, if possible, to give continuous service to medical staff men. If it is necessary to take care of a certain number, do so by dividing up the service in other ways than on the time basis. For instance, if you have four surgeons that must be accommodated on the staff, give one of them the fractures and dislocations, and let him do something in that field over a period of one or two or five years if you like; in other words, let him specialize in that field. Give another man the glands, including the gall bladder, the pancreas, the thyroid, etc., and let him make a careful study and do some work in that field; it is worthy the serious and hard work of any man over a period of years. Let another man do the intestinal surgery, including the appendix, the stomach, etc. Let another man take all the gynecology.

The medical service can be distributed in the same way, and so with the other services. It could be easily arranged so that one man on each service could be elected chief of the service, with certain executive functions, as, for instance, he could see that the correct technic in the operating rooms was being carefully lived up to; he could make it his business to see that the sterilization was done efficiently, that the solutions—such as Locke and Ringer—were properly made; he could see that the catgut was all right all the time; see that the operating tables were always in good order. Any superintendent of a hospital who had good sense would welcome such assistance on the part of the medical staff. This chief of service could also see that the rules were workable, and, if at any time he found one that seemed not to be workable, he could submit changes and get something adopted that would be workable. He could see that there was proper rotation of patients, which is really a part of the duty of the medical staff—that is to say, he could see that chronic cases or incurable cases were sent out or redistributed, or that arrangements were made for them in other institutions;

in other words, he could see that the material in the hospital was always kept fresh and active, and that the place was not filled up with cases that were not being benefited and that should not be there. The wise superintendent would also welcome advice along these lines.

It is difficult enough to make proper diagnosis in the beds in the hospital, with all the facilities of a laboratory; how much more difficult it is to make decent diagnosis in the dispensary—"on the wing," so to speak. If a diagnosis means anything, and if a dispensary is for the purpose of doing good in the community, then it goes without saying that intern service in the dispensary is not adequate, and that members of the visiting medical staff ought to take care of all, except the very obvious cases, and even in these cases they should be compelled to be present until their associates, the interns, demonstrate their qualifications to take care of these plain, easily diagnosed cases. A member of the medical staff who is too busy to keep dispensary hours ought to be too busy to need a place on the hospital staff, and he ought to get off and let somebody have it who will take care of it.

Segregation for the Infectious Diseases

To the Editor of THE MODERN HOSPITAL:

Can you send me outlines of plans for a contagious disease hospital building to cost from \$12,000 to \$15,000?

DR. P. B. WEBB.

Unfortunately there are no standard plans for communicable disease hospitals, but there are some pretty definite principles of architecture, although there are two schools—one of them created by Dr. Chapin and Dr. Richardson, at Providence, R. I., and the other school, which insists on segregation. Dr. Chapin and Dr. Richardson, you know, stand by the principle of contact of the communicable diseases and rely on soap and water for cleanliness. They build their communicable disease hospitals exactly as other hospitals are built, and apply their protective devices in the shape of a technic of cleanliness and asepsis in the institution. Some of the rest of us believe that where a hospital can be conducted as Dr. Richardson does the Providence institution, that is all right, because he has all-time physicians, graduate nurses, long-service interns, and no physicians in private practice are permitted to have patients in the hospital. Under these circumstances it is not a difficult thing to put in a rigid technic; but where clinicians in the community may come with their private patients, and where under-graduate pupil nurses are to be depended on for much of the nursing service, and where it is difficult to get interns, it seems to us that the thing to do is to segregate the patients, and that is not a difficult thing. We are sending to you, under separate cover, the story and plans of a communicable disease hospital carefully designed a year or two ago, in which segregation was planned for in a hospital whose medical staff thought they could conduct their institution like Richardson was conducting his. It was felt that, if the architecture were right for segregation, and if their plans for segregation by technic ever failed them, they would still have an efficient hospital. The hospital being sent you is, of course, larger than what you are planning, but the principles of construction are precisely the same—the building to keep your measles off to itself, if necessary, and to keep your scarlets and other communicable diseases to themselves. Then, if you want to have a single nurse go from one disease to another, and protect herself and her patients by washing her hands and changing her gown, all well and good.

Plans for a Small Hospital

To the Editor of THE MODERN HOSPITAL:

It is our purpose in the very near future to erect a small up-to-date hospital in this city with the estimated cost of the building between \$12,000 and \$15,000. We are writing you for information as regards plans of hospitals of this type, understanding that you are in a position to give us this information. We want to erect this building on the unit plan, so arranged that additions may be made from time to time. Any aid you may be in a position to give about plans, details, etc., will be greatly appreciated.

ALABAMA.

Your proposal to erect a small, flexible hospital, capable of additions from time to time, is a most interesting and attractive one, and you are to be congratulated on having so lively a subject to interest you in the development of the modern hospital idea.

There are no cut and dried plans for hospitals in this country, and we shall have to look into the matter more carefully than we have been able to do since your letter came. We think you had better make a sort of survey of your community; take into consideration the population and the character of the population, what percentage are whites and what negroes, the general trend of the occupations of the people, whether farmers or laborers in factories; the character of the town as to the density of population ought to be taken into consideration also, because the location of the hospital must be predicated on this condition; whether the hospital is to be self-supporting or largely charitable is of importance; a great deal will depend also on the source of the funds, both building and for permanent support, because, if it is a stock corporation idea, there will be fewer people to please and you can come nearer to doing what you choose than if the project is to be backed by the community at large or a great number of people—in which latter case they will demand many things that will be expensive.

Such facts as these are almost indispensable in contemplating the organization and construction of a hospital; this is what we call a survey of the hospital situation of the community, and we would like to have you make it and give us the data. We can then be of far greater service to you and shall be glad to help you.

LETTERS TO THE EDITOR

Autopsies in Hospitals for the Insane

To the Editor of THE MODERN HOSPITAL:

My attention has been called to certain statistics concerning autopsy permissions in a recent number of your journal. In this connection it may be of interest to say that at Danvers last year we performed autopsies in 54 percent of the cases dying, and that the twenty-year average for the institution is 44.25 percent—a record which far surpasses any of the state institutions of Massachusetts. I may also state that the number of autopsies last year was 99 (one partial examination is not included), and that the total number of autopsies for twenty years is 1,433. These figures are perhaps the more interesting when we recall the small number of hospitals for mental disease in which any autopsy work is done at all.

LAWSON G. LOWREY, M. D.,
Pathologist Danvers State Hospital.

Philadelphia's first occupational clinic is soon to be established in connection with the University of Pennsylvania Hospital, that city.



Please address items of news and inquiries regarding The Hospital Kitchen (such as equipment and other matters connected with the kitchen and dependent departments of food storage and service) to The Modern Hospital, Kitchen Department, Metropolitan Building, St. Louis.

The All-White Kitchen

Doubtless it is to conform to the idea of spotless cleanliness and sanitation that the all-white kitchen is the thing to be desired, and it is easy to equip a kitchen in all white, provided the necessary money is at hand.

White does not necessarily mean cleanliness or sanitation, but it is the one color which so accentuates the presence of dirt that those in charge easily see it and demand its removal, and consequently an all-white kitchen is more likely to be kept clean.

For the floor, white tile can be used. The walls can be white tile up to, say, 6 or 7 feet above the floor, and above that, including the ceiling, can be of one of the hard finishes which are waterproof, and can be scrubbed periodically to remove any dirt settling on them.

With all the apparatus set well away from the walls, as shown in all the kitchen plans published in these columns, there can be no excuse for anything but the most perfectly clean walls. With the equipment all set well above the floor and the floor properly sloped to allow of perfect drainage, the kitchen can be washed out with a hose and mopped, so that once a day after the work is over it can be left spotless to begin the next day's work. To enable this scheme to be carried out, the ranges must be set up on a raised base, with rounded corners, about three inches above the floor. A large proportion of the equipment can be white enamel finish. By white enamel is meant real enamel, and not japan posing under the name of white enamel, which is cheaper and not at all durable, and very shortly turns yellow in color.

The kitchen equipment specifications of a large hospital recently examined were drawn in such a way that japanned steel fronts could be used, while firms bidding on real vitrified porcelain enamel on 14-gauge steel would be barred by the large difference in cost.

If white equipment is desired, it is all important to see that the specifications call for "white vitrified porcelain enamel," and not for "white enamel." Japan, or the various trade names of materials which are simply japan, put on thin steel and dried at low temperatures, comes under the heading of white enamel finish, but vitrified porcelain enamel cannot be put on the steel, except at a very high heat, and the mention of the gauge of steel on which it is to be put precludes the use of thin steel, which will buckle and look unsightly in a comparatively short time.

As to the equipment, the use of white enamel can be very general, with, however, some limitations. The fronts of the ranges can be finished in enamel, but it is hardly worth while because the high heat in the range expands and contracts the enamel to such an extent that it cracks and the cracks cause an unsightly appearance, besides

which the heat discolours the enamel in time and grease spots bake into it.

When electric ranges are used, the conditions change. White enamel can be used because electric ranges are insulated and the heat consequently cannot affect the enamel. Steam kettles, steam roasters, steam tables, dish closets, and, if desired, the iron pipe legs of the wood- and steel-topped tables can all be finished in vitrified white porcelain enamel.

It is not practical to finish galvanized iron sinks in white because the damp will penetrate between the two thicknesses of metal and cause rapid rusting. There is no reason, however, why the front of the sinks cannot be painted white with some hard finish waterproof white paint, which, however, will have to be renewed from time to time.

White enameled steam jacketed kettles are of two varieties, one insulated and the other not. The heavily insulated kettle (Fig. 1) is of German origin, and consists

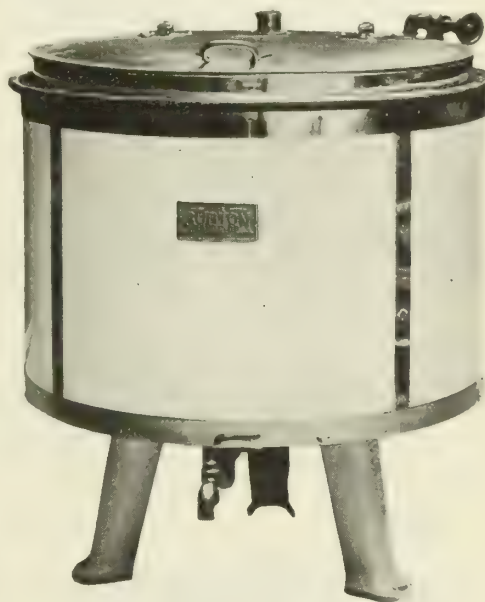


Fig. 1. Heavily insulated kettle.

of a cast-iron jacketed kettle, around which is a thick insulating packing, the sides being straight up and down, the white enameled finish being held in place by German silver or steel nickel-plated bands. In practice the insulation economizes the amount of steam used and prevents the heat being diffused into the kitchen. The covers of these kettles should be of heavy-gauge monel metal, this metal being incorrodible. The other kind of jacketed kettle (Fig. 2) is also of cast-iron, but the white enamel finish follows the contours of the kettle, and a thick sheet of asbestos forms the insulation around the steam jacket. The cover, of course, should be the same. These kettles are in use in the Cincinnati General and Ford hospitals and in several others.

The steam roaster (Fig. 3) is the type in use at the Ford Hospital, Detroit, Mich., and is cast-iron, steam jacketed, and heavily insulated between the cast-iron and the white enamel finish.

For all the flat surfaces on steam table fronts, dish warmers, urn stands, pantry counters, etc., the white enameled plates are put on over the metal foundation and held in place by metal bands. The legs of steam tables and steel cook's tables can be of cast-iron, white enameled, and the feet of the other fixtures can be of the same material.

In connection with these bands, care should again be exercised in specifying. German silver is the best metal because it is the same all the way through, and constant polishing cannot affect its appearance. Steel bands, copper-plated and then nickeled on the top of the copper, are in



Fig. 2. Steam jacketed stock kettle.

very general use and give satisfaction, but, of course, polishing will eventually rub off the nickel. Bands of steel nickeled without first copper-plating on the steel will not stand wear, owing to the rusting process which nickel does not prevent. Therefore, despite the slight extra ex-



Fig. 3. Steam jacketed roaster.

pense, it is better to specify German silver trimmings on all the fixtures.

Canopies over ranges can be finished in white enamel on the outside, and the effect is, of course, very striking and gives a finish to the all-white kitchen, impressing the visitor at once on his entering. The inside can be and has

been finished in white enamel, but it is doubtful if there is any practical value to be derived from the heavy extra expense which has to be incurred for this form of construction.

Finished and equipped on the above lines, the white kitchen will stay white all the time because the materials recommended are of a nondiscoloring nature, and none of the white enamel is recommended to be placed where excessive heat can turn it yellow.

Unquestionably, wherever the funds available will permit it, the all-white kitchen is desirable, but it is equally most inadvisable to put in an all-white kitchen of materials which are merely white and which will shortly change color or buckle, simply because the white color is wanted and the funds available will not permit the specifying of the proper materials. Better a black floor, finished in one of the iron-hard cement finishes and white hard finished walls, and the standard kitchen equipment, which can be kept in just as sanitary condition as the all white, than a fake all-white kitchen which is merely white.

Starching Methods in Use Today

The commercial laundryman at the present time is very much agitated by the different methods of using starch which are being presented for his consideration. These methods vary one from another, and the partisans of each are claiming superiority over the other, so that the ordinary laundryman, without the advantage of being able to thoroughly investigate the merits of these different methods, is very apt to be led astray and bring disaster on his head, and it is for that very reason, having the good of the trade at heart, that the various processes have been thoroughly investigated and these methods classified under the three heads, hot starch, raw starch, and cold starch.

HOT STARCH.—Hot starch, briefly, is that method with which we are most familiar, and consists of bringing certain proportions of starch and water to the boiling point, expanding or bursting the starch crystals, and using that sticky, cohesive paste for the operation designed. This method requires the starch to be used and kept at a high temperature, as the highest degree of penetration can be obtained only while the starch is in this condition, for, as we all know, just as soon as this mixture begins to cool it also begins to thicken or jelly, and loses its penetrating properties, in which condition it becomes to a large extent valueless to the user, and causes a large amount of labor and waste to keep on reheating and boiling to bring it back to its original fluidity. We will not go further into this process at this time, but rather mention it only for the purpose of comparison with the other methods now in vogue.

RAW STARCH.—This is a mixture of raw starch in water, of which no part whatever is cooked. The idea is all right—that of cooking or bursting the starch crystals in the article to which it is applied—but unfortunately starch is absolutely insoluble in water, and makes this method impracticable on account of the constant agitation necessary to keep the mixture in solution, and, in spite of the extreme vigilance on the part of the user, certain precipitation is bound to take place, which causes all sorts of trouble—lack of uniformity both in weight and stiffness, and glossy spots or high lights. Its disadvantages so far outweigh its advantages that, between the two methods, hot starch and raw starch, the former would unhesitatingly be recommended for easier and more uniform results.

COLD STARCH.—Cold starch, which might be called a compromise starch, because it is a mixture of cold cooked

starch and raw starch, is the most plausible and easiest of the different methods to handle, for by this method, and by this method only, it is possible to eliminate many of the troubles attendant on the use of hot and raw starch, and obtain at the same time easiness and simplicity of operation, economy, and improved quality. As stated, this process is a mixing of cold cooked starch and raw starch, and we might add at this time that the purpose of using the cold cooked starch is solely to keep the raw starch from precipitating. Anyone who is familiar with the character of cooked starch after it has become cold and jellied will readily recognize the impenetrability of its character, and it is in the blending of these two mixtures—that of the cold cooked starch and the raw starch—that the success of this method depends. They must be amalgamated, or so thoroughly mixed that the finished product is a smooth emulsion of the consistency of thick cream and of such a nature that it is impossible to determine where the cooked starch leaves off and the raw starch begins. This blending process can be accomplished successfully only in machines that have been specially constructed for this purpose on certain positive principles.

The only recommendation to be made in regard to the starch to be used in this preparation is that thick boiling starch be used, and preferably wheat starch, if that velvety, thick, pliable, almost unbreakable finish is desired. The object of using starch in this form, 50 percent cooked and 50 percent raw, is the same as in the raw starch process—that of conveying the raw starch in the articles to be starched and having the cooking or bursting of the crystals take place in the articles; we have in the cooked starch a vehicle for carrying it, and, owing to its cohesive qualities, holding the raw starch in suspension indefinitely.

To prepare this emulsion is very simple, as follows: It is first necessary to boil that portion of the mixture that is to be cooked. This is done in the usual manner, using about 16 ounces of starch to a gallon of water, and boiling about twenty minutes. This fluid is drawn off from the cooker in convenient receptacles and allowed to stand until it is thoroughly cooled and set. It is best that it should stand over night, but this is not essential. When ready to mix, remove the skin from the top of cold cooked starch, pour the mass into the mixing machine and run the machine until the starch has been reduced to a creamy emulsion. This emulsion will absolutely stay in solution for an indefinite period. This is to be used in practically the same manner as hot starch, and without any of the difficulties associated with the use of hot starch. This starch is as free to use as water, as it does not thicken, can be drawn from the receptacle in which it is kept without any further preparation and used in the laundry wherever starch is required. The fact that this emulsion carries 50 percent of raw starch makes it much more valuable and economical.

A number of laundrymen in various parts of the country are now working on this system and are enthusiastic in its praise. Some are using it in the same manner as they formerly had used the hot starch—that is, following up the starching by drying and dampening before ironing, while others are doing this with their collars only, having succeeded in starching 90 percent of their shirt work in the washing machine and taking them direct from the extractor to the press machines. This is no experiment. In one of the largest laundries in the East this method has been successfully followed now for two years, and the results are surprisingly and uniformly good, both as to the color of the material and the stiffness and flexibility of the cuffs, but it is the collar work that has been a revelation. The injection of this combination cold starch has produced

a collar which in the finish has been the dream of ambitious laundrymen for years—clean, clear, heavy, and flexible, with a remarkable freedom from streaks and greatly reducing cracked collars and “gobacks.”

INSANE ALIENS LET LOOSE

New York Paper Castigates Government for Lax Immigration Methods

A recent editorial in the New York *Sun* contained the following statement: One out of every four patients in the state hospitals for the insane is an alien, permitted to land in this country by the United States Government, and that the taxpayers of New York support them. They contribute to the congestion of the hospitals which renders impossible the service the managers desire to install; and the United States, in spite of the justice of the state's plea for relief, neglects to make provision for those mentally deficient it introduces into the country, or even to reimburse New York for the expenditure the state makes in their support.

The Federal Government should, of course, care for the maniacs it lets loose, but it will not. It prefers to turn them out of Ellis Island and put the burden of maintaining them on the states. The fact that deportation is at present difficult, and in many cases impossible, has no bearing on the case. The abuse was notorious before the circumstances now existing became effective. The United States has systematically shirked its duty and imposed on the states, particularly on New York, an expense of self-protection they never should be called on to bear.

If the Federal Government cannot keep lunatic aliens out of the United States, it should provide for their detention and treatment; and if it is indisposed or unable to do this, the least it can do is to pay New York what they cost every year.

THE LEVELING PROCESS IN THE HOSPITAL

Dr. Wiley, Famous Expert, Hopes to See Rich and Poor Treated Alike in Sickness

Dr. Harvey W. Wiley, in a recent address at Washington, D. C., to the graduating class of the National Homeopathic Hospital School for Nurses, said that he believed in what he called the socialization of medicine, and that he hoped to see the hospital enlarge its scope so that the people of all classes could receive skilled treatment. He declared also that he would have the hospitals run on the same principle as the public school, where rich and poor alike could be treated as rich and poor are educated. “This may not be a good doctrine for the physician who is getting \$40,000 a year,” said Dr. Wiley, “but it is good doctrine for the physician who is getting but \$500 a year, and it is good doctrine for the people.

Mercy Hospital, Chicago, has recently opened a new four-story addition erected at a cost of \$300,000. The first floor of the structure is reserved for children patients, a large playroom being one of the features. The second and third floors are divided into wards and private rooms, and the fourth floor is to be devoted to obstetrical service.

Mount Sinai Hospital, New York city, has announced the receipt of a gift of \$150,000 to endow its department of abdominal surgery. The donor is Charles A. Wimpfheimer, who had previously given \$230,000 to the institution.

AN EFFICIENT ORGANIZED CHARITY

Business Methods Obtain in the United Hospital Fund and It Requires Efficiency in the Institutions It Helps

The Hospital Saturday and Sunday Association, New York, now called the United Hospital Fund, was organized in 1879 with fifteen hospitals, and there are now forty-six. The first year's receipts were \$26,455.07, and last year's were \$126,421.75.

As its name suggests, the association sought at the outset to take a collection in synagogues and churches only on the last "Saturday and Sunday" of the year. Such collections, however, reach only a portion of the public and are at the mercy of the weather. The hospitals, on the other hand, need support every day in the year, and serve every individual, directly or indirectly, regardless of creed. Moreover, the association is so organized as to be free from partisanship, whether racial, religious, political, or institutional, and it is therefore in a position to enlist the hearty cooperation of the whole community. For these reasons the association is now at work throughout the whole year in raising funds not only from religious bodies and benevolent orders, but also from firms and individuals, and through the Woman's Auxiliary.

The association serves the voluntary or nonmunicipal hospitals and the benevolent public (1) by raising, with the least cost, money for the large amount of necessary free service to the poor, and (2) by distributing this money among the hospitals in such a way as to promote efficiency and cooperation. The distribution is based on the number of days of free hospital treatment given by each institution during the year, combined with the daily cost per ward patient, no credit, however, being allowed for a cost in excess of \$2 per day.

While the treasurer of the association, Mr. Charles Lanier, 59 Cedar street, New York, will give credit for and will promptly forward to particular hospitals funds so designated by the donors, the association strongly recommends that, as far as possible, the distribution be in accordance with the above method as being fair to other donors, stimulating to hospital efficiency and to the broad humanitarian spirit of which the association is a valuable expression.

On May 1, 1916, the fund distributed \$110,000 among forty-six institutions, including general and special hospitals, as well as hospitals for the care of women, children, incurables, and convalescents. The distribution of this money was as follows:

DISTRIBUTION OF THE UNDESIGNATED FUND MAY 1, 1916

Hospitals	Total days, 1916	Free days, 1916	Ward cost, per capita		Appropriation	
			1915	1916	1916	1915
<i>General Hospitals—</i>						
Mt. Sinai	159,579	92,311	\$1.94	\$2.17	\$ 8,745.16	\$ 9,519.77
New York Hospital	118,626	88,339	3.07	1.83	8,113.75	8,061.18
St. Luke's	113,623	81,210	2.24	2.17	7,931.45	7,490.83
Post-Graduate	119,753	59,829	2.13	2.65	5,843.25	5,898.57
German	88,511	54,552	2.29	2.47	5,327.87	4,783.75
Roosevelt	79,552	48,518	2.25	2.25	4,738.55	4,746.02
Lincoln	56,192	38,354	2.02	2.00	3,745.88	2,868.48
Lebanon	57,901	26,250	2.08	2.02	2,563.73	2,952.97
Beth Israel	40,738	24,606	1.97	2.16	2,367.08	2,624.63
Flower	50,605	17,086	2.38	2.65	1,668.72	1,334.33
French	30,846	11,814	2.15	1.67	1,153.82	1,068.07
Polyclinic	62,494	10,231	2.36	2.53	999.22	1,755.99
St. Mark's	28,679	10,787	1.84	2.28	969.23	1,001.91
Hahnemann	26,773	9,170	2.90	3.31	895.59	1,047.40
Knickerbocker	15,111	8,448	2.76	2.79	825.08	885.61
Volunteer	11,838	7,835	2.40	2.82	765.21	400.61
Sydenham	23,182	9,437	1.57	2.02	723.50	1,302.81
Har Moriah	11,035	6,381	2.53	2.40	.....	362.92
Park	13,306	3,692	2.56	2.76	360.68	250.00
Total	1,108,190	608,850	.....	.....	\$ 57,737.77	\$ 58,355.85
<i>Special Hospitals—</i>						
Orthopedic	55,527	53,279	\$1.71	\$1.81	\$ 4,449.02	\$ 4,648.29
Ruptured and crippled	63,324	43,734	1.42	1.50	3,032.60	2,959.52
Deformities and joint diseases	21,685	12,487	1.65	1.93	1,006.10	914.03
Manhattan Eye, Ear, and Throat	48,831	20,225	2.25	2.45	1,975.29	1,825.25
Eye and Ear Infirmary	44,047	21,550	1.72	2.00	1,810.04	1,903.24
Ophthalmic	13,776	8,068	2.21	2.90	788.06	757.28
Knapp Memorial	12,016	4,849	1.87	2.10	442.75	370.64
Skin and Cancer	28,253	21,059	2.00	1.93	2,056.74	1,658.85
General Memorial	20,428	14,071	2.76	2.63	1,374.24	1,495.25
House of Rest	26,647	26,647	1.65	1.73	2,147.04	2,148.79
Neurological	25,660	6,220	3.36	3.55	607.48	250.00
Total	360,194	232,189	.....	.....	\$ 19,689.36	\$ 18,931.14
<i>Incurables and Convalescents—</i>						
Montefiore Home	226,532	123,001	\$1.49	\$1.28	\$ 8,949.67	\$ 9,525.79
Home for Incurables	104,052	29,638	1.56	1.54	2,257.31	1,956.34
Isabella Heimath	18,018	18,018	1.21	1.29	1,064.61	1,327.69
House of the Holy Comforter	22,544	22,544	.74	.83	814.63	871.74
St. Andrew's Convalescent	5,635	5,040	1.05	1.03	258.42	281.49
Total	376,781	198,241	.....	.....	\$ 13,344.64	\$ 13,963.05
<i>Women and Children—</i>						
Lying-In	72,090	52,517	\$2.23	\$1.63	\$ 5,129.12	\$ 4,498.42
St. Mary's Free	48,937	48,937	1.20	1.10	2,867.67	2,685.49
Infirmary for Women and Children	32,748	22,648	1.88	1.90	2,079.21	2,095.39
Woman's Hospital	45,113	23,505	2.64	2.82	2,295.64	1,970.66
Babies' Hospital	23,760	18,534	1.81	1.98	1,638.15	2,037.92
Sloane Hospital	73,644	27,231	1.16	1.39	1,542.53	1,433.61
Nursery and Children's	23,903	12,311	1.99	1.54	1,196.31	1,572.13
Manhattan Maternity	15,328	9,588	2.02	1.84	936.42	983.48
Misericordia	29,359	14,949	1.00	1.25	730.00	734.16
Hospital for Women	16,425	5,711	2.00	1.80	557.78	363.94
Jewish Maternity	36,416	4,470	1.17	1.27	255.40	374.76
Total	417,723	240,401	.....	.....	\$ 19,228.23	\$ 18,749.96
<i>Summary—</i>						
General	1,108,190	608,850	.....	.....	\$ 57,737.77	\$ 58,355.85
Special	360,194	232,189	.....	.....	19,689.36	18,951.14
Women and children	417,723	240,401	.....	.....	19,228.23	18,749.96
Incurables	376,781	198,241	.....	.....	13,344.64	13,963.05
Grand total	2,262,888	1,279,681	.....	.....	\$110,000.00	\$110,000.00

All hospitals that hold membership in the United Hospital Fund have submitted their accounting system as well as management to a thorough examination, and are required to formulate and submit annual financial sheets, showing the various incomes, disbursements, and number of patients treated, as well as other vital information.

It is quite reasonable to suppose that donors of large sums would in all instances, as in any organized charity, insist on the strictest investigation and require a systematic method of accounting. Due to the latter fact, many institutions have done away with obsolete methods and are now keeping accurate and immediate records.

The accurate methods employed in obtaining hospital data have given the United Fund a vast amount of valuable statistical records, which have been correlated for comparison.

It may be of considerable interest to hospital administrators to compare the finances of their own institution with the following compilation.

Finances of the forty-six hospitals having membership in the association for the year ending September 30, 1914:

EXPENSES			INCOME		
DEPARTMENT EXPENSES FOOD KITCHEN LAUNDRY SERVICE ETC.	\$2,179,639.15	38%	PAYMENTS BY PATIENTS	\$2,101,852.21	37%
PROFESSIONAL CARE OF PATIENTS	1,427,290.10	25%	CITY PAYMENTS	522,678.89	10%
HOUSE AND PROPERTY	834,754.50	15%	DISPENSARY	288,721.44 291,325.54	5% 52%
DISPENSARY	493,320.22	9%	CONTRIBUTIONS	1,040,359.40	19%
ADMINIS- TRATION	445,954.53	8%	HOSP. & ASSN.	113,367.03	2%
CORPORATION	278,464.19	5%	INTEREST & RENTALS	1,030,394.49	19%
TOTAL	5,659,422.69	100%	LEGACIES	446,282.28	8%
				534,655.74	10%

CLEANLINESS IN THE HOSPITAL

Soap and Water Are Powerful Factors in Modern Institution Management

The floor space in the Manhattan Maternity Hospital, New York city, not including the basement, is approximately 14,000 square feet, of which fully two-thirds is laid with vitrified tile, the balance being of painted concrete, the total average floor space representing a fair opportunity for thorough cleanliness. Practically all of the tiled flooring is hand-scrubbed by women every day of the week except Sunday, and then only swept and the spots mopped and dried. In the private rooms, where there are painted concrete floors covered by rugs, the oil dust mop and carpet sweeper figure in the daily care. Twice each week all rugs are removed and subjected to the vacuum cleaner, while the floors are thoroughly cleaned and washed.

Nearly the entire time of four women may be charged

to floor scrubbing. These women are paid by the month, and receive at the present time \$23 plus board, which amounts to 50 cents additional per day. One \$2-a-day woman devotes practically one and one-half hours to this work, making up the total average daily time to approximately thirty-eight hours, or cash expended for the cleaning of 14,000 square feet approximately \$4.80. These figures may not correspond with other estimates along similar lines. We do not care to establish a precedent, but we do know we maintain a neat and clean institution, and we have abundant proof of the fact that since the organization of our institution in February, 1905, we have not had a single case of puerperal infection. We account for this fact in the liberal amount of hot water, soap, and elbow grease used on our floors and walls.

In sixteen years as a hospital superintendent I am prepared to offer as my deep conviction that household cleanliness plays a tremendous part in the remedial work of the hospital. Dust is a known menace to good results; hence dust must not be permitted an abiding place. A liberal use of antiseptics, coupled with the conspicuous absence of corner, crevice, ledge, or any dust lodging places, betokens a high grade of hospital management.

Because of the difficulty in finding good cleaners among the employees whom we are able to secure, the keeping of a clean hospital is no sinecure, but here, as in all hospital management, a systematic plan is necessary. Your people must be given their definite work and proper utensils and material with which to work. If they must depend on haphazard directions, poor tools and poor places to keep the tools, good results will not be obtained. So far it has rarely been my experience that these so-called cleaners will move the furniture, clean behind ordinary kept-open doors, brush and clean about the radiators, clean the tops and about the cases of doors, window ledges, sills, etc., unless someone is constantly on the alert. For dust removal of mattresses, pillows, also bed springs and wicker chairs, the vacuum cleaner is indispensable in the hospital where there are no opportunities for outdoor exposure. All this may apply to a very homely phase of the hospital, but to attempt to conduct an institution without a competent head in the housekeeping department (not necessarily including the management of food supplies), with a definite provision in the budget for expenses to be incurred, is to pave the way not only for great loss in appearance, but for positive dangers to the patients and to those who work on the floors.

The class of people who may be obtained as cleaners should not be expected to have any great amount of judgment or appreciation of the whys and wherefores involved, but they will be fairly good heels for a good head.

A dirty hospital is a thing to be shunned, while one clean corner provides a safe spot for the patient, surgeon and physician.

NANCY E. CADMUS, R. N.,

Superintendent Manhattan Maternity and Dispensary, New York.

A campaign to raise \$500,000 for the endowment of the nurses' training school of Johns Hopkins Hospital was formally launched at the commencement exercises of the school held May 24. In an address introducing the subject, Dr. William H. Welch declared that he believed the time had come when nurses should be provided with a broad basis of general education and training, and that the training school should be able to supply this. "When nursing training first began to be systematized," he added, "there was a saying that nurses would be 'overeducated,' but nothing is more absurd. Trained nursing is a profession intertwined with the profession of medicine, but distinct from it."

HINTS FOR HOSPITAL SUPERINTENDENTS.

A good time to think about cleaning up the premises around the power plant or boiler house is the present. Perhaps your coal pile is pretty well down by this time, as you are not having to keep up the fires over the house. The arches in one or two of your boilers may be pretty well burned out; one or more of your grates may need renewing, or one thousand little mishaps may have occurred in the plant that could not be remedied during cold weather. Now is a good time to do that work, and it is also a good time to do some whitewashing around the dark and dingy boiler plant. A machine that costs two or three dollars and a little whitewash or calcimine will work miracles in the power plant.

Now take occasion to have duplicates of all hospital forms placed on your desk; study these carefully, and in all probability you will consign some of them to the waste basket. Study your various departments, make a survey in their entirety, and do not be narrow in your views. Imagine, if you will, first, the direct function of the form; second, is its establishment absolutely necessary? third, who will bear the burden of work in filling out the form after its installation? fourth, the ultimate termination of the form and a consideration of the value as a reference, whether to check the consumption of supplies in individual departments or its use as a unit in your record work. In the making of a form, remember that your nurses are trained to care for the sick and not in clerical work, and the more intricate your forms the greater liability there will be to error. Make your forms simple as possible, and, when permissible, have all essential articles in print, so that a pencil mark underscoring the word will designate the want without superfluous work.

This month one should think about the "swat the fly" campaign. If there is any place on earth in which the fly ought to be destroyed, it is in the modern hospital. We talk and think and dream in terms of asepsis; we try to protect our patients from the advent of infection of all sorts; most sick people in our hospitals are suffering from infections of one sort or another, and the festive little house fly has a bunch of legs that seem by nature designed for the special purpose of carrying infections from one place to another, and from one person to another. The medical profession, especially the pathologists, are pretty well convinced that most infections are communicated by direct contact; the fly is about as direct contact as one can think of.

Then comes the question of what we are going to do about the fly in hospitals, and when we do think about this problem we are thinking not only in terms of our hospital service, but as examples for the rest of the community, because, after all, the hospital is or should be the health center of the community, and its methods and processes should be predicated, not only on what the hospital itself needs, but on what the community needs. The hospital should teach its medical men, its interns, its nurses, its patients, its employees, and the friends of patients, and through all these the public, as to what should be done about health matters and how it should be done.

Shall we poison the fly with liquid poison set about in saucers, where the baby can reach them, or where the fly may fill itself full and then drop on the baby's bread and butter, or where he can smear his legs full of arsenic or strychnia and unload in the baby's milk?

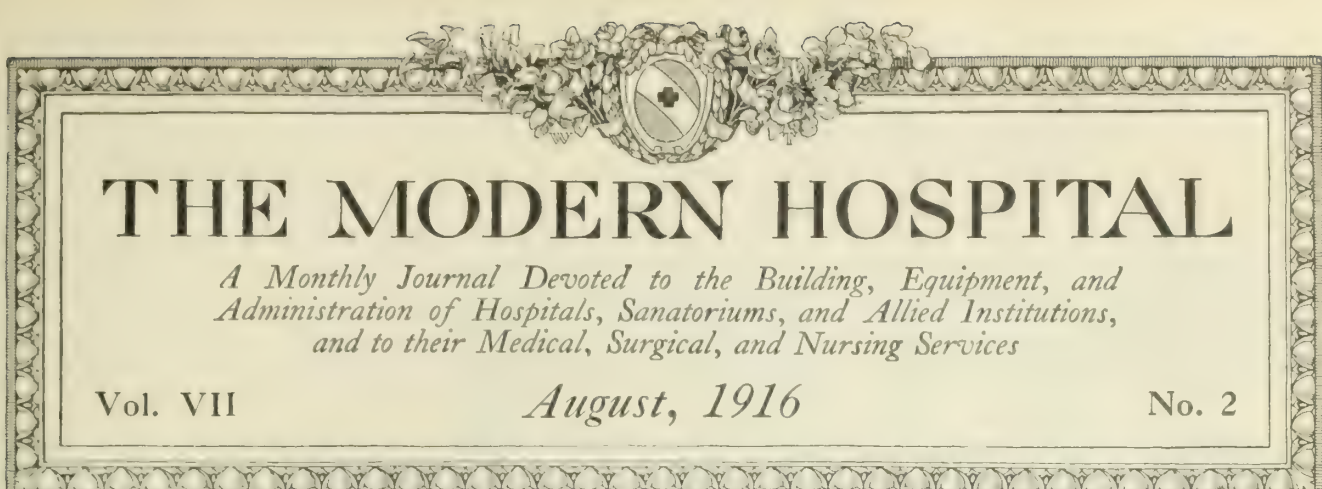
Fly paper is not an unmixed blessing—on the seat of one's trousers—but it seems far and away the best thing to have about the place to catch flies, it being understood always that there is a limit to the number of flies in the house, such limit being fixed by screens everywhere. Better indulge in wholesale quantities of fly paper, and better do it in time to catch the "early bird." There are many excellent places to store fly paper, and fly paper full of flies is a lot more of an inspiration than a table or roomful of flies that are being treated as cherished guests.

This is the time of year when things begin to get on our nerves. Most of us have been in the hospital since last fall, through a hard and exacting winter. Our nerve ends are pretty close to the surface these days, and they are going to get closer until after we have had a vacation and a rest. In the meantime the wise superintendent will get out of the hospital for two or three hours every day. Go to the park somewhere and watch the squirrels play and hear the birds sing; take an automobile ride with one of the members of the medical staff; go down town and get into the busy whirl, and forget yourself and all your troubles; take a street car ride or a walk—take anything, but get away from the hospital and its anxieties. It is too much to expect that we shall be able to entirely recuperate from the lowest ebb of vitality with merely a two weeks' vacation, only part of which will we be able to enjoy because at the first we get tired resting.

The term of a tedious, tiresome winter has closed, and everybody is inclined to be somewhat fretful and nervous. There is no class of hospital workers on whom the confinement and the hospital atmosphere tells so unkindly as on the young medical man who is in the hospital as an intern. This young man came out of a four years' hard course of study a year ago, missed his vacation, and came into the hospital perhaps on June 1. He had been accustomed to study before that, but he had also been accustomed to a good deal of outdoor exercise, walking to and from school, scuffling about among his fellows in the intervals of classes, and galloping up and down the stairs of the college building. He was also accustomed perhaps to home cooking, or at least a great variety of food, because if he lived in a boarding house he could make a change when the food became monotonous.

Then all of a sudden this is changed; he gets inside the walls of a house full of sick people; he is put into a white uniform that doesn't lend itself to short intervals of outdoor play; he spends long hours on the wards and obtains his rest irregularly, must get out of bed frequently, lives the humdrum life of the hospital atmosphere, eats the routine, monotonous food of the institution—and comes through the winter in pretty poor shape. This young man is not capable of analyzing his situation or even analyzing himself; the result is that at the first opportunity, about this season of the year, he flies into the air and is angry, and says and does things that he would not think of doing under normal conditions, conspires against the hospital management and the board of trustees, and makes an immense amount of trouble for everybody, and more especially for himself.

Miss Kathleen Murphy, a graduate of St. Mary's Hospital, Philadelphia, and recently head nurse at the Harrisburg (Pa.) Hospital, has accepted the position of head nurse at the Sacred Heart Hospital at Allentown in the same state. She succeeds Miss Agnes Wenger, who resigned to take up private nursing in Reading.



THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. VII

August, 1916

No. 2

SYSTEMATIC HEALTH SERVICE FOR EMPLOYEES

Employees of the Metropolitan Life Insurance Company Are Periodically Examined as to General Health Conditions—A Dispensary Installed—Clinics For the Examination of Eyes and Teeth Special Features—Special Provision For Tuberculous Cases

By LEE K. FRANKEL, PH. D., SIXTH VICE-PRESIDENT METROPOLITAN LIFE INSURANCE COMPANY, NEW YORK

INDUSTRY is rapidly developing a conscience. No longer does it feel that it has fulfilled its obligations to employees when it has paid the individual worker his wage. It is also necessary to provide a safe and healthful work place. A part of this new attitude can be directly traced to the legal enactments favoring workers which have been placed on the statute books, but the social conscience of employers has developed even farther in many cases than would have been required by existing or contemplated legislation. Many are living up to their belief that the wage paid shall purchase time, interest, and effort, but that it does not and must not buy physical or mental exhaustion.

Employers are not wholly disinterested in their efforts to provide good working conditions. It has come to be generally realized, although but few statistics are as yet available, that health conservation very definitely improves the productivity and working ability of employees. More than this, it makes for loyalty on the part of the working force and reduces the time lost because of illness. Medical care and dispensary facilities help to keep employees at work, or at least to return them to their tasks at the earliest possible moment.

One of the most fully developed plans for the care of employees is that in force in the Metropolitan Life Insurance Company. This company employs about 18,000 persons—13,000 in its agency and field force and 4,500 in its home office. Of the latter group about two-thirds are women. An attempt is here made to care for employees

and to maintain them at the maximum of physical efficiency. In the belief that its experience will be of assistance to the increasing number of persons interested in this subject, this article has been prepared.

All candidates for employment are medically examined before entrance into the company's service. The medical examination is a thorough one, and it includes a report on family and personal history, an examination of heart, lungs, sight, hearing, and teeth, coupled with urinalysis. The question blank in use is similar to the one used by the company in examining applicants for ordinary insurance. The purpose of the examination is to protect prospective employees from work for which they are not physically qualified and to protect employees in the company's service from contagious diseases.

Applicants for field positions in the company are also carefully examined for employment. The agency work of the company requires employees to be on their feet a large part of the time. The examination in this case is, consequently, in a large measure, to keep persons physically unqualified from entering the service of the company.

ANNUAL REEXAMINATION

During the past year all employees in the service of the company have been medically examined—the employees in the home office by a special group of examiners and those in the field by the company's regular medical examiners. The examination in this case has been of the same type

as required of applicants for life insurance, and it is as thorough as that given to applicants for employment. The aims of the examination are, however, very different. The examination on entrance is to protect the applicant and the existing



Fig. 1. Metropolitan Life Insurance Company, New York. Dental examining room and office of chief dentist.

force. Here the purposes are the prevention of diseases, the correction of ascertained minor defects, the detection of disease in its incipient stage, the encouragement of treatment in suspected serious conditions, and the recommendation of treatment where neglected. A careful analysis of the records obtained is at present being made, and the analysis of the impairments found should be a valuable contribution to the material on the subject of health of persons engaged in industry.

While all employees are at present examined annually, additional periodic examinations are made of employees in the commissary department. The purpose of this is evident, as the danger of transmission of contagious diseases through the handling of food is well known. It is particularly important that the company protect its employees by carefully guarding the health of those engaged in preparing and serving food for home office employees. This work in the home office is in charge of two physicians on full time, one nurse on full time and one on part time, and a group of clerks.

DISPENSARY

The purpose of a medical dispensary is to care for sickness or accident arising during working hours, and secure proper and immediate attention for those who are not in good health. In order to accommodate the work of the medical dispensary, larger quarters were secured during the past year. The dispensary now contains a large waiting room, office of the chief nurse, separate rest rooms for men and for women, medical and surgical rooms, together with various retiring rooms for special examinations. It also contains an optical examination room and an optical fitting room. The walls are of white tile and the floors are of concrete.

During 1915, 25,263 visits were made, a daily average of 91.5. The average cost per visit was 33.3 cents, which does not include rent. It is interesting to note that during the last six

months 3,112 different persons out of a total of 4,500 persons employed in the home office visited the dispensary.

This work is in charge of a full-time physician and three nurses. In addition to this, we have

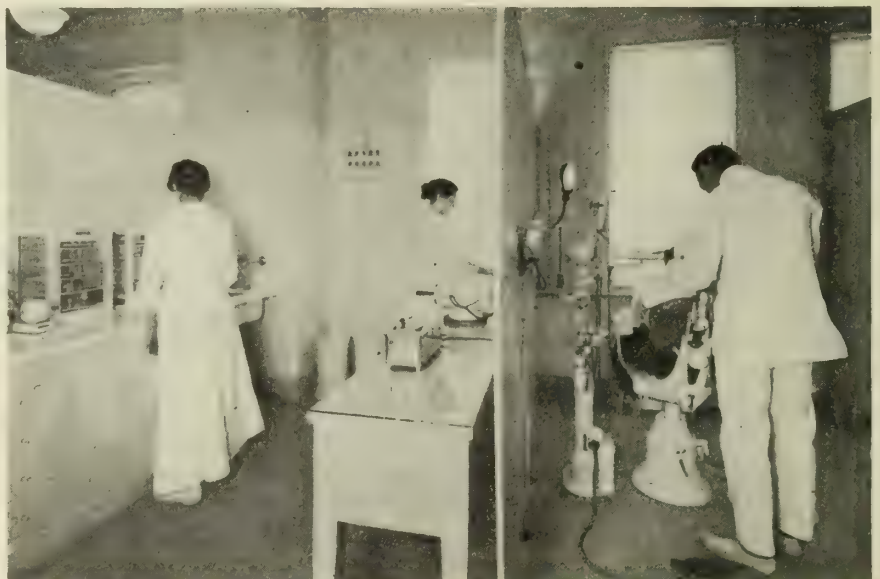


Fig. 2. Metropolitan Life Insurance Company, New York. Dental clinic and sterilizing equipment.

specialists in diseases of the eye, ear, nose, and throat, who conduct the clinics in this field.

A detailed record of the rest room services is as follows:

REST ROOM RECORD—JANUARY 1, 1915, TO JANUARY 1, 1916

	Total visits	Women	Men	Medical	Surgical	Daily average	Sent home	Sent to dispensary	Sent to hospital	Granted leave of absence	Cost
January	2,015	1,355	660	1,405	610	89.5	80	35	2	4	.271
February	1,788	1,199	589	1,092	696	89.4	56	24	1	4	.310
March	2,204	1,545	659	1,491	713	88.1	138	22	1	9	.284
April	2,077	1,445	632	1,504	573	86.5	132	32	0	21	.294
May	1,887	1,366	521	1,280	598	85.7	93	28	1	17	.344
June	2,116	1,480	636	1,305	811	88.1	88	40	0	21	.314
July	1,964	1,299	665	1,234	730	85.3	72	23	0	18	.388
August	2,166	1,430	736	1,395	771	90.2	78	29	0	28	.351
September ...	2,016	1,343	673	1,340	676	89.6	87	24	0	3	.399
October	2,306	1,499	807	1,513	793	102.4	84	27	0	9	.334
November	2,002	1,314	688	1,287	715	93.1	75	39	1	5	.390
December	2,722	1,798	924	1,987	735	111.1	184	39	0	9	.318
Total	25,263	17,073	8,190	16,842	8,421	91.5	1,167	362	6	148	.333



Fig. 3. Metropolitan Life Insurance Company, New York. Medical rest room, showing reception, medical, and surgical rooms adjoining.

SPECIAL CLINICS

An optical clinic for the examination of all types of eye conditions has been installed. During 1914, 475 clerks were examined, and during 1915, 757 examinations were made. By arrangement with a manufacturer of optical supplies the practice of furnishing eye-glasses at cost to employees has been continued, and during the year 2,934 eye-glasses were supplied, costing \$3,377.70.

Daily clinics for nose and throat are also held. In these cases local treatment is given when this is of simple character, and in other cases employees are referred to dispensaries or to specialists.

TUBERCULOSIS CARE

The company has maintained for a number of years a sanatorium for the care of tuberculous

employees, which is to be described in some detail in another number of this journal. The care given to pretubercular clerks and those who have returned from the sanatorium is of interest. On returning from the sanatorium, each clerk reports biweekly to be weighed and bimonthly for a period of six months for a careful examination of the lungs and a survey of general health. After this time the examination is made every three months for an additional year. In this way the cases are carefully watched, and at the first indication of recurrence are returned to the sana-



Fig. 4. Metropolitan Life Insurance Company, New York. Women's rest room.

torium. A careful study of tuberculous clerks who have returned to the home office has been made. A total of sixty have been under observation in the medical rest room during 1915. Of these, eight relapsed to their tuberculous condi-

tion and fifty-two are now in active service. Of the total of eight, four died during 1915 and two were retired within the year. Equally satisfactory results have been observed among employees in the field force who have returned to their work.

Clerks who are anemic or in a tuberculous condition report to the medical rest room twice daily for milk. During the past year there was a daily average of thirty-five. Their condition is carefully watched, and without doubt this preventive work has done much to reduce the number of cases of tuberculosis among home office employees, and to secure early treatment for such cases as have developed.

CARE AFTER ILLNESS

Clerks who have been absent because of illness are required to report to the medical division before they are allowed to return to work. This is for the double purpose of protecting the convalescent employees from going to work before warranted by their physical condition, and also to protect the other clerks in the home office from the possibility of infection. In addition to this, a nurse is frequently sent to the clerk's home in order to determine the extent of the illness and to render such assistance as may be necessary.

DENTAL CLINIC

On July 1, 1915, a dental clinic for home office employees was established. Examinations are given and teeth thoroughly cleansed semiannually. The equipment of the dental clinic consists of an emergency chair, the office of the chief dentist, a sterilizing room, five dental chairs, and lockers for men and women employees. A radiographic outfit has been installed, and all suspected cases of blind abscess are being examined. Studies are at present being made of the relation of conditions found in the annual medical reexaminations and those brought out by the dental clinic. It is believed that interesting and suggestive results will be obtained.

This statement of the work that is being done covers but one part of the company's efforts for its employees, and it is proper to mention the free luncheon service for home office employees, the insurance against sickness, the provisions for life insurance, for pensions, and for educational and recreational activity. These are of as much importance as the medical and dental care described. The latter part is, however, of most interest to hospital workers. Through it is relieved, to some extent at least, the strain of routine work to which so many of our hospitals are at present restricted. The opportunity is given them to do special work in their clinics because selected and

special cases are sent to them. With the spread of the movement of giving special medical care to employees, the time will come when a large number of hospitals now doing general work will be able to specialize and to limit their activities to a selected group of diseases and conditions.

It is to be hoped that hospital workers will assist us in developing uniform reports and records for medical dispensaries and medical examinations in order that the results obtained may be compared with those of hospital dispensaries and with organizations dealing with similar groups of employees.

RED CROSS ORGANIZES BASE HOSPITALS

Large General Hospitals at Many Points to Be Fitted for Military Purposes in Case of War

The director-general of the Red Cross, Colonel Jefferson R. Kean, has completed the organization of several base hospital units. These units are made up of the personnel of the larger general hospitals, and include the following institutions:

Presbyterian Hospital, New York. Director and chief of surgical service, Dr. George E. Brewer.

Mount Sinai Hospital, New York. Director, Dr. N. E. Brill.

Bellevue Hospital, New York. Director and chief of surgical service, Dr. George David Stewart.

New York Hospital, New York. Director and chief of surgical service, Dr. Charles L. Gibson.

New York Post-Graduate Hospital, New York. Director, Dr. Samuel Lloyd.

Brooklyn Hospital for navy. Director and chief of surgical service, Dr. W. B. Brinsmade.

Massachusetts General Hospital, Boston. Director, Dr. Frederic A. Washburn.

Boston City Hospital, Boston. Director, Dr. J. J. Dowling.

Harvard University Hospital, Massachusetts. Director and chief of surgical service, Dr. Harvey Cushing.

Lakeside Hospital, Cleveland. Director, Dr. George W. Crile.

Rochester Hospital, N. Y. Director, John M. Swan.

Johns Hopkins Hospital, Baltimore. Director, Dr. Winford Smith.

Harper Hospital, Detroit. Director, Dr. Angus McLean.

In Chicago, Michael Reese, Presbyterian, St. Luke's, and Mercy hospitals have been designated, and even as remote points as San Francisco have been called on to participate in the movement. Only recently Dr. Summersgill, of the University of California Hospital, was asked to fit his institution for base hospital uses.

It is intended that these base hospitals shall be transported to the various seats of military operation in case of war, and it is estimated that one base hospital will be required for each 20,000 enlisted men. Their duties will be to receive the sick and wounded transferred from the field hospitals at the front, and will be equipped to receive approximately 500 patients. All hospitals organized by the Red Cross, if called into active service, pass under the authority of the War Department and become an adjunct to its medical service. The medical officers are given military commissions in the reserve corps, and receive voluntary commissions when called into active service.

PRESENT SCOPE OF WELFARE WORK IN THE IRON AND STEEL INDUSTRY

Many Lines of Welfare Work Have Been Introduced and Are Being Successfully Conducted—Not Only Is the Workshop Improved, But the Household Is Being Benefited—The Family as Well as the Worker Is Helped to Advance

BY THOMAS DARLINGTON, C. E., M. D.

AMONG the general subjects now covered by welfare work in the American iron and steel industry are the following:

Prevention of accidents.	Lighting.
Drinking water supplies.	First aid.
Washing facilities.	Hospitals.
Laundries.	Trained nurses and social workers.
Lockers.	Physical examination of employees.
Toilet arrangements.	Lunch buckets and lunch rooms.
Drainage and sewage disposal.	Commissaries (bread, meat).
Disposition of garbage and rubbish.	Milk supplies.
Care of stables and animals.	Flies, mosquitoes, and vermin.
Heating work places in winter.	Clean mills and yards.
Cooling work places in summer.	Housing.
Ventilation.	Gardens.
Overcrowding.	Rest and recreation.
Dust, gases, and fumes.	Insurance.
Education.	Pensions.
Relief funds.	Saving and investing.
Compensation.	

The results accomplished by and the benefits derived from welfare work must be judged largely by the reasons the industries have for doing it. Owing to a lack of statistics for comparison, the ultimate results of such welfare work cannot yet be shown. Later on, when statistics have been recorded, results can be stated in more definite terms, but even then the highest results cannot be tabulated or even expressed in words. Nevertheless, by a short review of some of the work we may realize to a certain extent what these benefits are.

Much has been done toward obtaining wholesome drinking water supplies. Many supplies have been examined, not only by survey of their source, but also bacteriologically and chemically. As the result of such examination, many supplies have been abandoned, while other supplies, such as springs, have been walled up to prevent surface pollution, or have been removed, while still others have been filtered or purified. It requires no special investigation to show the good resulting from such work. Scientific research has conclusively proved that polluted water supplies may cause disease, such as typhoid, dysentery, and diarrhea. The abandonment of such polluted supplies has made conditions more healthful. Besides being purified, some of the mill supplies have been cooled

by ammonia machines or brine solutions, so that icing the water has been eliminated. Where such elimination has been effected, cramps have ceased to occur. Moreover, in the process of purification, removal of turbidity, proper cooling, and the use of drinking fountains, the supply is made more attractive, and consequently more water will be drunk. For physiological reasons this favorably affects both health and efficiency. Water is a natural constituent of the body, and is to be considered as a food, though not in the sense that it liberates energy. It affects secretion and excretion, and the activity of the various organs; it aids in the absorption of food and carries away waste; it diminishes fatigue; it regulates body temperature and acts as a distributor of heat. There seems to be no question that the drinking of water lessens the use of alcoholic drinks. Water not properly treated may carry lead in solution, and be more or less poisonous, and drinking cups used in common are liable to carry disease.

Much has been done in the installation of basins and showers, and in the erection of dry houses, in many places a large percentage of the employees bathing daily. Here, again, we cannot adequately estimate the good derived, but we do know that such facilities increase the respect of others. The opportunity to wash before going home makes the work of the home less burdensome, and cleanliness of the hands is of special importance, because hands carry disease. Shower baths affect the circulation of the blood, not only in the skin, but in the whole body. They produce a redistribution of the blood in the body, and for the time being there is an actual change in the blood itself. Cold showers increase capacity for muscular work. Showers eliminate more rapidly the products of waste, and so constitute one of the methods of relieving fatigue. A shower bath removes the waste products from the skin, and makes one less liable to feel a change in temperature. It reduces the heat of the body, especially on humid days, when the body temperature may rise above normal. Incidentally it may be mentioned that the roller towel has been abandoned in the majority of plants.

Many new toilets of modern construction have been built and hundreds of old privies have been abolished. Special care has been given to the exclusion of flies and the prevention of pollution of

the soil. There have been many improvements in the disposal of collections from pan privies, especially by incineration or depositing in septic tanks.

Pollution of streams has been stopped in many

prevalence of such dust has been entirely avoided in certain mills in the industry. Air conditions have been much improved by the elimination of the hydrocarbon series and other gases produced by open fires where combustion is incomplete, as these gases are now carried to the outside of the building by properly constructed conduits. Many improvements have been made in the heating of plants in winter by fresh air brought from the outside, filtered, warmed, and distributed to the various parts of the building to be heated, which insures a good supply of air free from dust and gases.

Cleanliness has also been encouraged. Frequently men have fallen upon fruit skins or the remains of luncheon thrown upon the ground. Perhaps more has been done in the making of clean yards than in any other direction. It is also to be noted that the psychological effect of pleas-

ant and clean surroundings has an excellent effect on the workmen. Beauty and order are persuasive everywhere, and few people can resist their influence.

Progress in first aid has been very extensive,

cases. Thousands of dollars have been spent for drainage, particularly of back alleys and streets. This drainage has had a very beneficial effect in the prevention of the breeding of mosquitoes and prevention of malaria. Better methods of collection of garbage are constantly being installed, with short periods of collection. Much has been done in educating employees in the use of garbage cans and the necessity of keeping the contents covered, which prevents the carrying of bacteria by flies from the can to the table. The prevention of the breeding of flies, especially in mining camps and villages, has been largely effected by the prompt removal of manure and making the stables more sanitary. Education by means of circulars explaining the dangers of flies as carriers of disease has accomplished a great deal.

The cooling of work places in summer is now being considered in many plants, and efforts are being made to have heated work places more comfortable, thus preventing heat stroke. Thirty years ago, according to English statistics, nearly all who breathed dust from grinding steel and stone died sooner or later from tuberculosis. The

and the steel industry is now leading the world in this line of welfare work. The results of such work have never been better shown than in the paper read before the American Iron and Steel Institute a year ago by the surgeon of one of the



Fig. 1. Iron and Steel Industry. First aid team at mine No. 1, Penn-Mary Coal Company, Heilwood, Pa.



Fig. 2. Iron and Steel Industry. First aid car of the Tennessee Coal, Iron and Railroad Company.

largest companies. The reduction of septic cases from 50 percent to $\frac{1}{10}$ of 1 percent speaks volumes. Nowhere else in the world has such provision been made for the care of employees who are injured. The emergency hospitals which have

and in other houses set aside for the education of mothers they have been taught to make rag carpets, the boys have been taught carpentry, classes of girls taught how to sew, and older girls taught cooking and the care of the home, and mothers how to cut out children's garments. Domestic educators have taught how to clean house and the essentials of good house-keeping.

What the human race will achieve in the future depends much on the conservation of the health of the children of the nation and on the education of these children. Many efforts have been put forth in the industry for the prevention of disease among children. The establishment of playgrounds is a step in this direction. These playgrounds promote health, education, morality, and happiness. They promote health by the effect of sunlight, of fresh air, of exercise on body processes,

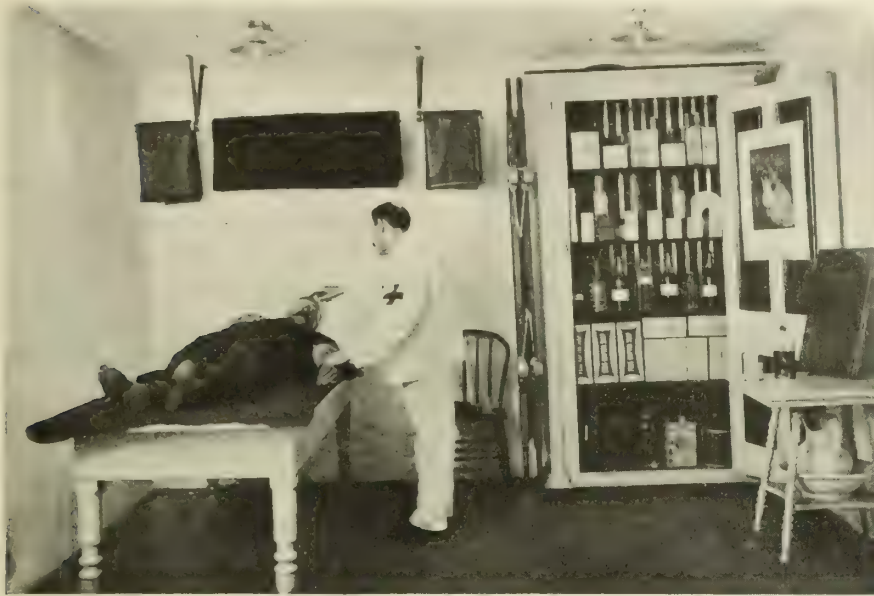


Fig. 3. Iron and Steel Industry. First aid underground room of the H. C. Frick Coke Company.

been provided near mine and mill stand today as examples for the whole world, and they have materially aided in reducing human suffering. Many lives have been saved as progress has been made to prevent fatal termination by prompt care and by the knowledge on the part of the injured workman that such care is the best that can be obtained.

A rest farm for the wives of employees who are in poor health has been established, which is under the care of a physician and nurse. The support given settlement houses and the employment of trained nurses has helped in keeping the companies in sympathy with the employees and replacing despondency with cheerfulness. These trained nurses have given their attention to the women and children, particularly babies. Their duties include the weekly weighing of babies, teaching mothers how to dress and undress them, how to modify their milk, the guidance of expectant mothers and nursing them during confinement, the care of children, medical school inspection, and other things too numerous to mention. At many of these settlement houses

and by inducing appetite and healthful sleep. Play is essential to the education of the child. Playgrounds promote morality and happiness. At many of the playgrounds certain accessories have been provided which aid both in edu-



Fig. 4. Iron and Steel Industry. Hospital of the American Bridge Company.

cation and in health, among which are drinking fountains, wash rooms, and water closets. Teachers have been provided to instruct in play and in the use of these accessories. Besides recreation for the younger people, club houses have been

erected for the older ones, and in fact these club houses provide recreation for all ages.

All energy is derived from food, and good food is, therefore, of great importance. Some plants have provided dining rooms and restaurants, with properly prepared and well-selected foods, furnished at the lowest practical price, served under cheerful and pleasant surroundings. To prevent ptomaine and other similar poisoning, properly constructed commissaries are oftentimes necessary in order that food may be properly protected from flies and kept from spoiling by means of refrigerators.

Many a man has been kept awake by a sick and crying child, the result of improper food, and in-



Fig. 5. Iron and Steel Industry. Instructor from the Illinois Steel Company, South Chicago, attending the family of recent arrivals.

juries have happened to a man from the worry over the sick child at home. Such conditions have been improved in certain places by furnishing certified milk at a reasonable cost, some companies having herds of cows for this purpose. Education of the children has not been neglected, and in many places school houses have been erected for the children of employees, the teachers being furnished by the state. In some churches have been built.

Good housing is essential to both health and contentment, for here the workman builds up his strength to perform life's duties. Excellent houses have been built by some companies on sanitary sites, and rented or sold at reasonable rates, many of such houses having all modern conveniences. In many instances construction camps have been improved.

Of distinct economic value has been the assistance given by employers to those living in mining and industrial villages by fencing in plots for gardens, assisting, when necessary, in plowing and fertilization, and stimulating the employees and encouraging them in thrift and industry by offering them prizes for the gardens. These gardens reduce the cost of living. The amount of vegetables grown is often more than enough for the family, and some families have a surplus to sell. Gardens promote health by bringing the members of the family into the fresh air and sunshine. They mean cleaner yards and better care of drainage and waste, thus preventing odors and avoiding the breeding of flies and mosquitoes; they provide a greater variety of food, as many persons eat too much meat, and an excess of flesh diet is not conducive to the best work, growth, or health; and they tend to the abolition or the confining of domestic animals. Gardens promote morality, keep the owner from the saloon, and promote his own self-respect; they help make homes, and have a refining influence on the family.

The subjects mentioned above constitute some of the general lines of welfare work which are now being conducted by the iron and steel industry. All of the topics named in the outline at the head of this article have had careful consideration, and many have been carried to an actuality, some companies excelling in one direction and some in another. Various lines of welfare work have been well done in different places, and millions of dollars are being spent annually to improve the conditions of labor in the iron and steel industry.

It is most commendable to relieve suffering, but it is far greater to search out and remove the causes of disease, of penury, and of crime, and to feel that one may say with Abou-ben-Adhem, "Write me as one who loves his fellow-men."

When the writer contemplates the large number who are interested in this welfare work, all interested in helping their fellow-creatures, he feels like exclaiming with Shakespeare:

Oh, wonder,
How many goodly creatures are there here!
How beauteous is mankind!
Oh, brave new world, that has such people in it.

Surely no work becomes one better, and it is hoped that the outcome will help to realize the vision of Tennyson:

Ring out the old, ring in the new.
Ring in the valiant man and free,
The larger heart and kindlier hand;
Ring out the darkness of the land,
Ring in the Christ that is to be.

The Hospital for Women of Maryland, Baltimore, Md., is erecting an addition to serve as a home for its nurses.

PROVISION FOR MEDICAL CARE UNDER HEALTH INSURANCE

Hospital Treatment One of the Prerequisites, and Arrangements Must Be Predicated on Such Provision—Some of the Details of Operation Likely to Prevail in the Future

BY ALEXANDER LAMBERT, M. D., NEW YORK, CHAIRMAN OF THE SOCIAL INSURANCE COMMITTEE,
AMERICAN MEDICAL ASSOCIATION

THE inevitability of health insurance for the wage-earner under state auspices is so widely recognized that it behooves the medical profession to consider seriously this subject which so vitally affects the health of the industrial population, as well as matters of professional interest. The forerunner of health insurance—workmen's compensation—already has been adopted in thirty-four states within the short space of six years, while in a few states payment is made under workmen's compensation for diseases clearly contracted as the result of employment. The next logical step is, therefore, to protect the wage-earner not only when his disability is due to sickness or accident arising directly from his employment, but also when his disability arises less obviously from this as well as from other sources.

Bills providing for just such protection to manual employees and other employees earning less than \$100 a month were introduced into the legislatures of Massachusetts, New York, and New Jersey during the session of 1916. For these groups health insurance is made compulsory, because experience elsewhere has shown that voluntary insurance does not reach the persons who most need protection. The benefits provided are medical, surgical, and nursing attendance, including necessary hospital care, medicines and supplies; also a cash benefit beginning on the fourth day of disability equal to two-thirds of wages and given for a maximum of twenty-six weeks in one year; and finally a funeral benefit of not more than \$50. The cost of these benefits and their administration, amounting to about 3 percent of the wages, is to be borne two-fifths by the employee, two-fifths by the employer, and one-fifth by the state. The administration is to be vested in mutual associations of employers and employees, organized according to localities and trades, and managed jointly by employers and workers, under the general supervision of a state social insurance commission.

The organization of this medical aid under health insurance presents very definite problems, of which one is the adoption of a system of administration which will guarantee excellent medical service. A second is the adoption of a method of payment which will be not only adequate to the physician, but which will also encourage a high standard of service.

An effort to solve some of these problems has been made in the third edition of a model health insurance bill just published by the American Association for Labor Legislation. In this draft no single method of organizing medical aid has been saddled on any one insurance carrier; instead, each carrier is free to select the method most suited to local conditions, subject to the approval of the social insurance commission. In granting approval the commission will be guided by the advice of the medical advisory board selected by the various state societies, so that the medical profession will have an opportunity to express its preferences through this body, which is to be consulted on all medical matters. As an alternative, the carriers in a district may unite into a health insurance union, and cooperate in the arrangements with general practitioners, nurses, specialists, or hospitals.

One arrangement which a carrier or a health insurance union may adopt is that of a panel of physicians. If this method is selected, certain conditions must be fulfilled. First, any legally qualified physician shall be entitled to join the panel. The possibility of setting a definite qualification, such as an examination or other test for physicians wishing to undertake insurance practice, has been suggested as one means of obtaining especially well-qualified men. This method would, of course, offer some guarantee that an insurance doctor would be a more able man than some practitioners found in industrial districts. As a matter of practice, it is difficult to see how mutual associations of employers and employees established by state legislation would be justified in setting up standards for medical practice other than those maintained by the state law for licensing physicians. For this and for other reasons it seems desirable that health insurance should not set up a conflicting standard. A second stipulation is the right of the patient to select any doctor on the panel, subject to the physician's right to refuse a patient. This provision is one which many physicians and patients believe essential if the personal relationship between doctor and patient is to be maintained. A third condition is contained in the limitation placed on the number of insured patients whom a panel physician may undertake to treat. This is expected to prevent undue concentration of patients among

a few physicians, and thus prevent the hurried attention given to patients when insurance practice is too large. On this point of careless work the Publication Committee of the New York *State Journal of Medicine* says, "Medical public opinion demands . . . that the physician shall not permit himself to be placed in positions where he gives careless, incompetent service, to the injury of those under his care. Any physician neglecting this standard loses caste. He is condemned by his colleagues, and the position or system in which such service is likely to occur is held in contempt by the profession, and has been classified under the opprobrious name of contract practice. All medical service is really a contract, and many physicians under salaries, such as those with insurance companies or railroads, are not condemned, nor do they lose caste by accepting such contracts. But any contract which carries with it an unreasonable amount of work by the doctor, which in turn forces neglectful, hurried service to the patients, is always condemned." Undoubtedly the low rate of payment prevailing in lodge practice has tempted some physicians, if they are to make a living, to treat more patients than they can give careful attention. The proposed establishment of a maximum number of insured patients will eliminate the most flagrant abuse on this score.

A second method of organization is to employ salaried physicians, and to give the patients reasonably free choice among those so employed. This system, already common in industrial practice in this country, may prove especially advantageous in localities where a large number of persons are employed in any one industry or plant, because of the familiarity which a doctor will gain of the illness traceable to the occupation. In still other areas a carrier, as a third possibility, may provide a district medical officer for the service of all patients within a specified area. Although these last two methods do not provide for the free choice possible under a panel system, the insured persons and their employers, through their representatives in control of each fund, are free to select the system the members prefer.

Supervision of doctors by other physicians would effect an improvement over the present-day medical practice, since supervision will bring to light the incapable man who, by his actual handling of cases, has proved his inability. On such findings of fact a carrier responsible for the proper care of its members would be justified in excluding from its panel the physician who had proved incapable. This oversight is provided in the bill through the medical officer of the fund employed to "examine patients who claim

cash benefit, to provide certificates of disability, and to supervise the character of the medical service in the interests of insured patients, physicians, and carriers." A suggestion of doubtful value and probably impractical has been made that these duties might very well be intrusted to an officer of the state board of health appointed with special reference to his qualifications for this service, and that thus the judgment of an impartial physician as well as the official cooperation of the health department would be secured. It is evident that in either case the medical officer who examines the patient asking for benefit, and who furnishes him from time to time with a certificate of disability, will be in a position to know the efficiency of each individual physician. Moreover, the separation of the two functions of treatment and of certification will relieve the attending physician of the distasteful duty of refusing a certificate to a patient, and at the same time will free him of any fear that, because of care in granting certificates, he is losing popularity with his patients. This simple expedient will probably do as much to maintain a high standard of service as almost any other one provision in the bill.

The easy access to a second opinion, which will entail no extra expense to the patient, and the ready cooperation between the general practitioner, the specialist, and the hospitals would also be an improvement. Hospital care, as one of the benefits which have been paid for in the weekly contributions, is to be given during twenty-six weeks of disability in the necessary cases, with the approval of the medical officer and with the consent of the insured patient or his family, and may be demanded by the carrier if it is imperative for the proper care of the patient. If, under such circumstances, the insured should refuse to enter a hospital, he is to be penalized by having his cash payments stopped. Financial arrangements for hospital treatment which have met the approval of the social insurance commission may be made by the carriers directly with the hospitals. As an alternative, hospital care may be furnished in hospitals erected and maintained by the fund, with the approval of the commission. But, in either case, hospital care for the insured is to be paid for, just as other medical service for the insured will be remunerated.

The second problem, that of paying physicians, is no inconsiderable part of the problem of providing efficient service. It goes without saying that physicians should be adequately remunerated, and that much of the unpaid practice of today, as in the dispensaries, will be compensated under health insurance. The question of what is "adequate remuneration" under a system which will

assure 100 percent collections will arise, but of even greater importance to the medical profession is the basis on which payments are made.

It is the inherent defects in a capitation payment of so much per person per year, which the *New York State Journal of Medicine* points out, that have made "lodge practice" so opprobrious among the medical profession. In other words, it is the basis, not merely the rate of payment, which has encouraged careless work for these lodge patients, for whom payment is received regardless of the services rendered. A search must be made for some basis which will escape this difficulty. Payment per visit, while it avoids this difficulty, since it remunerates the physician in proportion to the services rendered, and while it affords more considerate care for the patient, has the unfortunate practical disadvantage of being very costly. A compromise between these two systems may be made whereby a sum calculated on a per capita basis is divided among physicians in proportion to the services rendered by each. This system presents a known charge to the insurance funds, makes it possible for physicians to check those few who may make unnecessary visits in an effort to increase their income artificially, but unfortunately it decreases the payments to physicians with an increase in work as in time of epidemic. On the other hand, the larger payment for each unit of work done when the services are fewer offsets to a degree the disadvantage of the reverse situation, and this may prove a financial stimulus to preventive medicine.

A fourth possible solution is the employment of a few salaried physicians by each fund, similar to the arrangements now made by many railroads. For this problem the bill has not reached a solution, and obviously, if any proposed solution is to be satisfactory to the medical profession, who are most closely concerned, it must have their cooperation.

The inevitable drift in this country to health insurance, which presents new problems to the medical profession, requires the earnest thought of every physician. Each practitioner should consider what improvements he can suggest over the tentative plans, with the present choice of administrative arrangements, with the provision for a medical officer, and with the close cooperation between hospitals and the insurance system. Each physician should address himself particularly to the as yet unsolved problem of the rate and the method of payment. As a result of such careful thought it will be possible to evolve an organization which not only will do no injury to the profession, but which will improve the medical service available to the American wage-earner.

UNITED STATES ARMY WANTS MORE NURSES

War Department Increases Corps to Serve Larger Army—Requirements of the Service

Several base hospitals have recently been established along the Mexican border in order to insure proper medical attention and care for the troops now on duty there. In consequence, authority has been given for a large increase in the army nurse corps, so that these hospitals may be supplied with the necessary number of nurses, and nurses are being appointed as rapidly as possible. Application for appointment should be made to the superintendent, army nurse corps, room 345½ War Department, Washington, D. C. The requirements, in brief, are as follows:

School.—Must be a graduate of a school connected with a hospital containing at least 100 beds. If trained in a smaller hospital, training must be supplemented by an additional experience of at least six months in a large general hospital.

Credentials.—Moral and professional must be satisfactory.

Essay.—On some practical subject.

Physical examination.—When practicable, by medical officer of the army, otherwise by family physician.

Registration.

Age, 25 to 35.

Citizen.—If not a citizen, must make declaration to become such.

Agreement to serve three years.

The salary of nurses serving in the United States are: first three years, \$50 per month; second three years, \$55 per month; third three years, \$60 per month; thereafter, \$65 per month.

In addition to the above rates, chief nurses may receive an increase not to exceed \$30 per month. Beyond the limits of the United States all nurses will receive \$10 per month additional (except in Porto Rico, Hawaii, and Panama).

The Government will provide maintenance and for the laundering of nurses' uniforms. Nurses will also be allowed cumulative leave of absence, with pay, at the rate of thirty days for each calendar year. First-class transportation and Pullman accommodation will be furnished when traveling under orders, also reimbursement for incidental expenses—meals, fees, etc., not to exceed \$4.50 per day.

Salvarsan Comes from Germany

Negotiations between the United States Department of State and the German Government have resulted in a large shipment of salvarsan, valued at approximately \$500,000, and was received at the port of New York on May 25. This is practically the first shipment of any quantity to enter the United States since the beginning of the war, and was consigned through Holland and by Dutch transportation to the states. Assurance was given by the British and French Governments that the shipment would not be molested or confiscated.

Dr. H. A. Lowe, who was the largest stockholder in the Southwest Hospital Association at Springfield, Mo., and surgeon-in-chief of the hospital, has sold his interest to George McDaniel, cashier of the McDaniel National Bank. Dr. Lowe is taking post-graduate work in surgery in New York city, and on his return to Springfield in the fall will resume private practice. The Southwest Hospital was opened in 1914 by Dr. Lowe and a number of other physicians.

ILLINOIS CENTRAL RAILROAD OPENS NEW HOSPITAL

An Industrial Institution Comparable With the Best General Hospitals of the Present Day—Building of Block Type Where All Agencies for Diagnosis and Treatment Are Conveniently Located—Some of the Details

BY RICHARD E. SCHMIDT, CHICAGO, OF SCHMIDT, GARDEN & MARTIN, ARCHITECTS

WHILE it is generally admitted that the Continental hospital plans are not adapted to American conditions, yet the fundamental premise on which such a hospital group is planned is one which every hospital administrator and architect holds before him as an ideal. The superabundance, or at least abundance, of general area, and consequent spaciousness of plan and beauty of grounds, are found in few city hospitals. In our larger cities it is rare, indeed, that any hospital has sufficient ground area, but at the new Illinois Central Hospital the officials, with far-sighted judgment, provided a site of unusual extent and equally unusual location. Across the way is Jackson Park, the largest of the public parks of Chicago, better known as the site of the World's Fair of 1893. That stately remnant of the fair, the Field's Columbian Museum, and its lone companion, the picturesque German building, framed by the ever-changing waters of Lake Michigan, are glimpsed through the trees. In the illustrations the site is barren and unattractive, but this will eventually be remedied by careful planting from the plans already prepared. The street frontage is about 470 feet, with an average depth of 225 feet, a total of about two and one-half acres.

While the first unit of the group cares for but 111 patients, yet the area of the site is such that a nurses' and help's home, an additional wing for patients, and two miscellaneous buildings are provided in the group plan, bringing the capacity to about 250 patients' beds and 150 nurses' and help's beds, and this in three-story buildings without crowding. What this will mean during the inevitable expansion, only those know who have faced this recurrent and perplexing problem.

With such a site the possibilities of the group plan are great, and only after careful study was the group plan finally determined on. Of the finished group the main building and power house have been erected, forming a T-shaped plan, the long front of the hospital facing the east, Jackson Park, and the lake with a short wing to the west. Directly west of this wing is the power house and laundry, extending almost to the lot line. The nurses' and help's home is planned for the north end of the lot, and an additional patients' wing is planned for the south end, both of which would have east and west axes. Such future additions

have been provided for in the placing of the initial unit, and additional equipment can be placed in the boiler room, laundry, and kitchen without any structural changes. The operating departments and administrative division are planned large enough for such future growth, or so as to be easily enlarged.

A hospital is necessarily semi-public in function, but for a period, at least of each patient's life, it is "home." To combine the two elements successfully is the problem which constantly recurs to those of us who build hospitals.

In the case of the Illinois Central Hospital it was felt that a slightly stronger emphasis on the public nature of the group was desirable, due primarily to its function as the hospital of what is more generally considered a quasi-public institution—the railroad—and its very conspicuous site. The two conflicting forces have been blended and harmonized to express this locality; its measure of success I shall leave for others to say. The materials are a red brick of variegated color, and considerable texture with Bedford stone trim.

Before proceeding to the description of the plan it would be well to examine the kind of service the hospital will perform. This is, primarily, to relieve the ailments of the Illinois Central Railroad employees—not only local employees, but, where such treatment is indicated, those of the entire system. This, of course, makes it largely a hospital for men, and from 65 to 75 percent surgical. It will, therefore, be no surprise to find that some departments usually found in a general hospital are absent, and that considerable space is devoted to surgical and out-patient treatment rooms and to hydrotherapy and mechanotherapy treatment rooms.

An unusually large amount of recreational or convalescent space is necessary because of the large number of ambulatory patients. The small number of private rooms—the "revenue getters"—should also be noted in this connection; there are but six with communicating bath and four others, two of which are in the isolation department. Temporarily some of the 2-bed wards on the third floor are being used as private rooms.

The entrance lobby has properly been dignified by an appropriate architectural treatment in Tavernelle Claire marble wainscot and fire-place with Tennessee marble floor, delicately decorated



Fig. 1



Fig. 2.

Figs. 1, 2. Illinois Central Hospital, Chicago. Front and side elevations. Note closed sun parlors at the south end, roof promenade, and separation of the power plant from the hospital, with tunnel connecting the two.

plaster ceiling, and plaster panels above the wainscot. The lobby divides the building into three parts; the north wing is used by the ambulance receiving room, out-patients' department, pharmacy, offices, and interns' quarters; the south end for laboratories, x-ray department, hydro and Zander department, chief surgeon's office, and record room; the west section is devoted to nurses' dining rooms, upper part of kitchen, and help's locker rooms. A secondary corridor behind the lobby permits the necessary communication between the out-patients at north and south ends, the treatment room for in- and out-patients of the

building, and to the freight and passenger elevators and stairways, and to the nurses' dining room, without passing through the lobby. A separate entrance from the street has been provided for the out-patient department.

The second floor is devoted entirely to patients, and logically divides itself into three units, each unit having its own toilet and utility rooms, with services common to all at the crossing. Here are the freight and passenger elevators, stairs, serving pantry, nurses' station and locker rooms, clothes chute, and bath and linen rooms. The elevators have been carefully shut off from the

main corridors, so that they will not be annoying to patients. Serving pantries are equipped with brine-cooled refrigerators, steam table, sinks, and built-in cases. Service from kitchen is by means of electric dumbwaiter and the freight elevator adjacent. They are large and well lighted. The nurses' station, so situated as to control the entire floor, is equipped at one side with a large steel medicine case with sink, and an illuminated annunciator box directly in front. The nurses' locker room, functioning as its name implies and also as a toilet room, being directly back of the head nurse's station, is easily controlled and of great advantage in checking nurses "in" and "out."

Adjacent to the north utility room is a commodious patients' clothes room, with individual lockers for each bed on the floor and a coat rack in center.

At the end of the west wing is an isolation unit of two small rooms, with connecting bath room. This de-

case of epidemic the entire west wing of 15 beds could be so used. At the south end is a very large sun porch with gray-pink walls and sliding case-ment sash.

One of the most advanced steps in this hospital is in the size of the wards; there are no "hallways," as one patient called them, and the largest ward has but 4 beds. Fire escapes are an integral part of the building, constructed of reinforced concrete and incased in brick walls.

The third floor is much the same as the second floor in plan, except that the west wing is devoted to the operating department and that some private rooms are substituted for wards. Two surgical

dressing rooms are provided at the north end. The operating department is unusually complete, with three operating rooms of varying sizes, with adjoining scrub rooms and other usual auxiliaries. Steel instrument cases of special design are built into the corridor walls, and the nurses' work room is lined with steel cases from floor to ceiling. The entire operating department has a gray vitreous tile floor,



Fig. 3.



Fig. 4.

partment is so arranged that but 1 bed may be used, or it may be expanded to 2 or 5 beds, and, of course, in



Fig. 6.

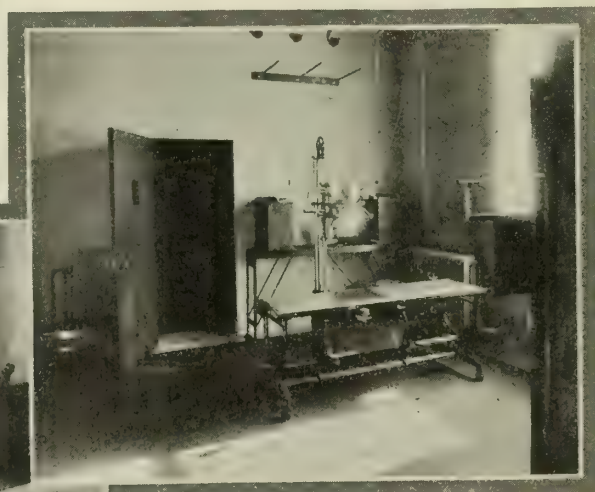


Fig. 5.

with terrazzo base and plaster walls. In the operating rooms the side walls are painted a light olive-green, with a cream-white ceiling, and elsewhere

Illinois Central Hospital, Chicago. Fig. 3—A corner of one of the sun parlors; the very pretty shades can be drawn when required to keep out the glare; the floors are terrazzo, laid plastic in large blocks. Fig. 4—Laboratory of pathology; note complete equipment and roominess for work. Fig. 5—A room in the x-ray department; note careful insulation of wires and separate observation room at right. Fig. 6—Hydrotherapy department; the floors are perfectly watertight, and all apparatus is carefully protected; there is a hot and cold shower, needle spray, douche, hot cabinet, and pack tables.

in the operating department the walls and ceilings are painted cream-white. The operating rooms are brightly illuminated for night operations by rows of lamps and reflectors set in steel boxes outlining the operating room windows at sides and ceilings. The boxes have steel doors glazed with prism glass, and are recessed flush with the walls and ceilings.

For the ambulatory patients a splendid suite of recreational rooms has been arranged on the fourth floor, including a large bil-

laundry, supplies, etc., and connects with the elevator in the power house. In its equipment the power house is complete, including two high-pressure boilers, heating tanks for hot water and for the hot water heating system, with their necessary auxiliaries, a carbon dioxide refrigerating plant and refrigerated water system, garbage burner, mechanical ash hoists, and electric transformers.

It is the intention to lay tracks over the coal bunkers (which are not roofed), and by means of

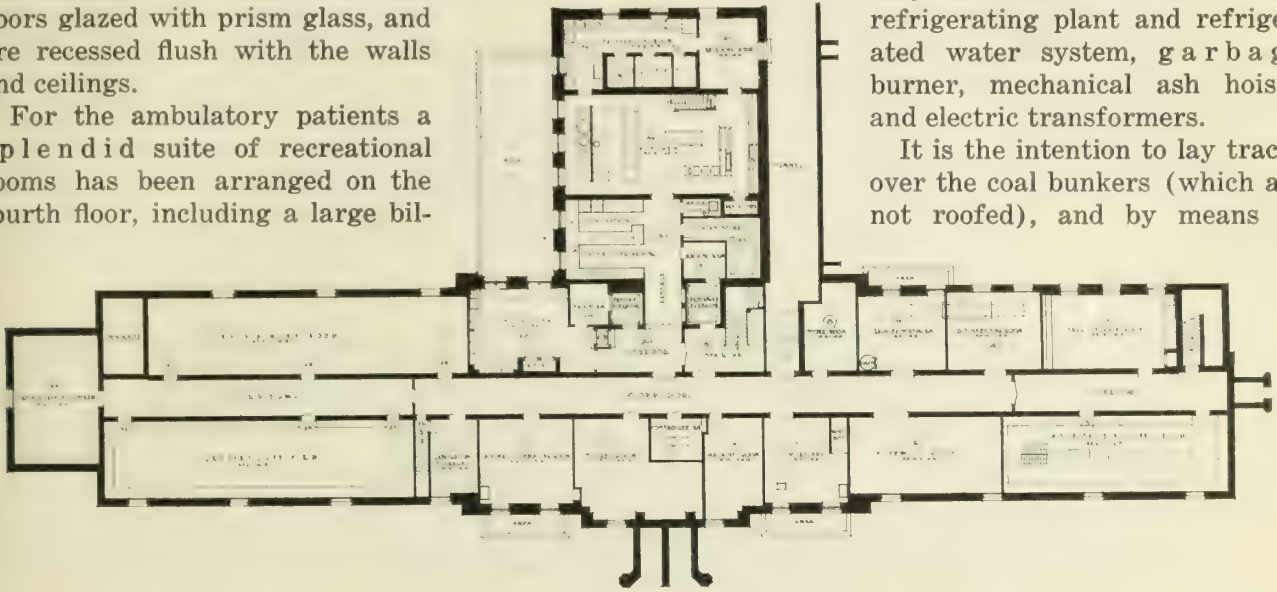


Fig. 7. Illinois Central Hospital. Basement floor plan.

liard room, card room, and solarium. Over the entire wing south of the solarium stretches a quarry-tiled promenade deck. A small serving pantry, toilet room, and fan room complete this floor.

In the basement are the kitchen and its accessories, an unusually liberal amount of storage space, a morgue, animal operating room, drug storage space, etc. The kitchen is a two-story room, with exposure in two directions, insuring the best of natural ventilation, which is supplemented by a complete mechanical exhaust system. The other kitchen rooms receive sufficient light

dump cars unload the coal directly into the bunker. The ash hoist will carry the ashes from the large storage room up to cars on the same level. At the laundry floor level arrangements have been made for the receipt of carload shipments, which can then be taken down the elevator. In cases of emergency, coaches with injured can be brought to the hospital in the same way. The elevator has an opening at top of tunnel, and can be used for the carrying of wagon shipments to the basement. The stack is simply but attractively built.

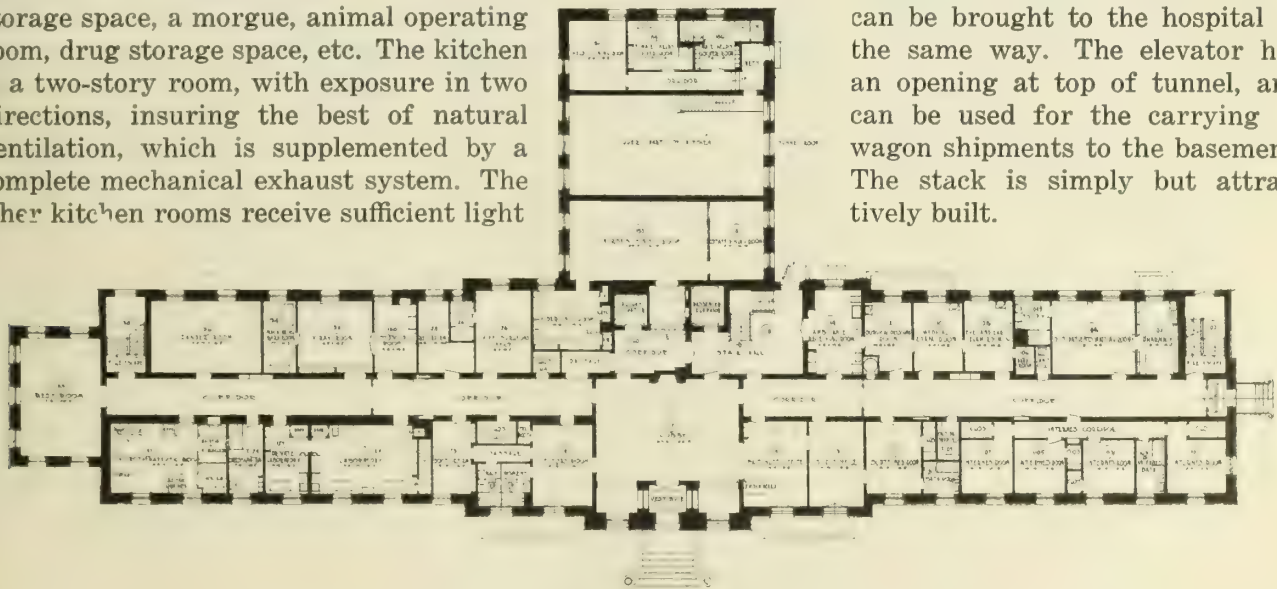


Fig. 8. Illinois Central Hospital. First floor plan.

from windows, which open into large areaways.

The power house is an entirely distinct building, connected to the hospital by a commodious pipe tunnel along the north wall of the west wing. This tunnel serves as a passage between buildings for

To the modern hospital, fireproof construction, coved corners and sanitary base and trim, and flush panel doors, bear the same relation that the electric starter does to the automobile—perfectly workable without it, but extremely antiquated if

omitted. Such items are worthy of comment in a magazine such as *THE MODERN HOSPITAL* only when omitted. But there are many vexing questions of hospital building that do need mention. Such is the perpetual question of floors. In this group battleship linoleum, cemented to a concrete base, is used in all patients' rooms and corridors; in the operating and out-patient departments and hydro room the floors are gray vitreous ceramic tile; in unfinished basement, power house, and laundry the floors are Portland cement, and elsewhere terrazzo is used. With all types of floor, except cement, a terrazzo coved base, with ter-

sorting room, whence it is conveyed to the laundry.

Both elevators and the dumbwaiter in the hospital building are of the push-button type. Special care has been used in the design of this equipment to avoid the annoying disturbances caused by their operation. The elevator machines are bedded on pads of felt and wood, and the controlling switches have been placed in a vault in the basement, remote from the elevator shafts. This care, combined with the isolation of the elevators behind double doors, has practically

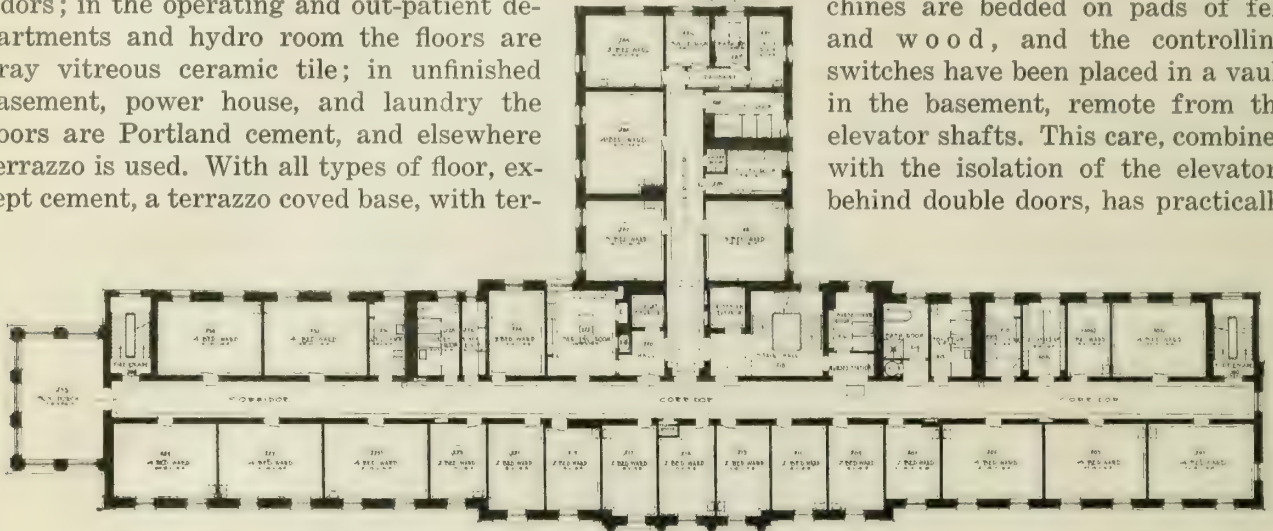


Fig. 9. Illinois Central Hospital. Second floor plan.

razzo border, is used. The door frames are of drawn steel of the flush type, with frame stopping at base and terrazzo continuing through the jamb in lieu of steel frame.

The shelving, wherever possible, is in small sections mounted on casters, so as to be easily moved. Where this was not feasible, built-in steel cases with flush doors, sanitary coved corners, and steel shelves, were used. The instrument cases are a step in advance of the usual steel case, for here the frames and doors are of drawn steel set flush with the plaster, and the side and back of heavy steel with coved corners; the shelves are of plate

eliminated the usual annoyance from this source.

The large refrigerators were erected with the building, and consist of cork block walls inclosed on the exterior with clay tile blocks, finished with wall plaster on the exterior and Portland cement plaster on the interior. The floor and ceiling construction is similar, except that the floor is of terrazzo. The smaller refrigerators were specially made to fit recesses in walls, are lined with white glass and finished in enamel on the outside, and set flush with the plaster. All refrigerators are cooled mechanically.

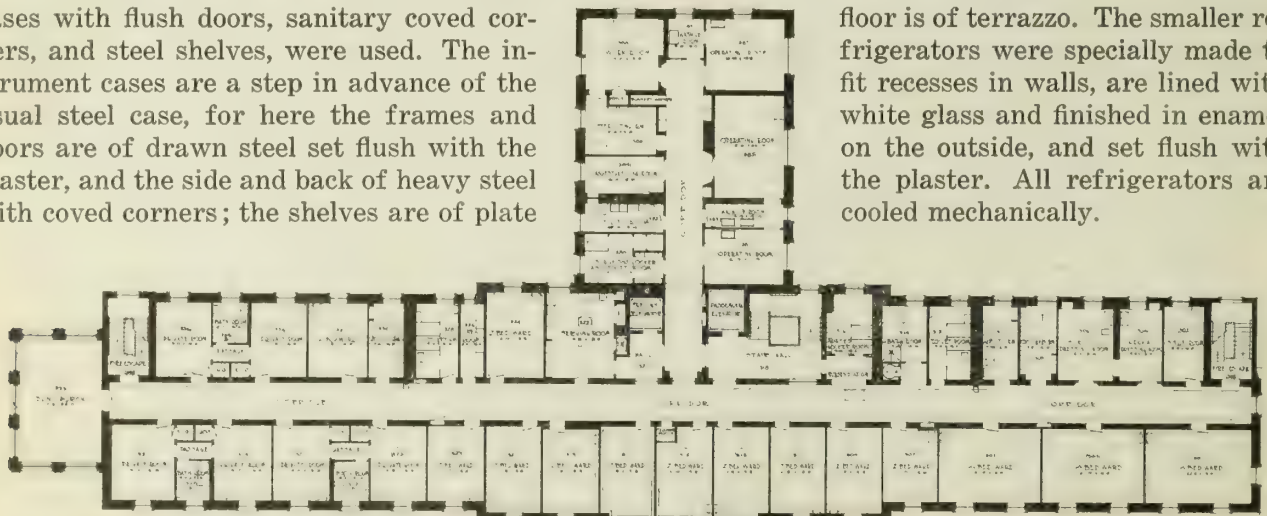


Fig. 10. Illinois Central Hospital. Third floor plan.

glass, supported on showcase brackets, and the doors are of drawn steel. All hardware is heavy bronze and all hinges are invisible.

The clothes chute is glass lined, with openings at each floor, glass ventilator at the top, and washing ring overhead. The terminus is the laundry

The patients call the nurses by silent signal system, with push buttons at each bed, lamps over each door, and an illuminated annunciator box at the nurses' station, with a master annunciator in the superintendent's office. The doctors, nurses, and other hospital officials are called by a

telegraph system, consisting of an ordinary telegraph key in the office, with sounders concealed in flush steel boxes with perforated doors near the end of each wing on each floor.

The question of how much or little mechanical ventilation was solved here by the installation of a mechanical exhaust system, with ducts to all toilet and utility rooms, serving rooms, kitchens, x-ray rooms, etc., is for the future to determine.

All water passes through large quartz filters. Drinking water is twice filtered, refrigerated, and circulated throughout

pared by the architects, thus insuring the perfect coordination between parts which is possible in no other way. It is interesting to note that all sterilizers, except the large dressing sterilizers, are hung from the wall, and are without the usual legs which so interfere with easy and rapid cleansing, and, wherever possible, this principle has been followed. Water closets, lavatories, and slop sinks are invariably bracketed from the wall.

All wood and steel furniture, beds, draperies, shades, etc., were

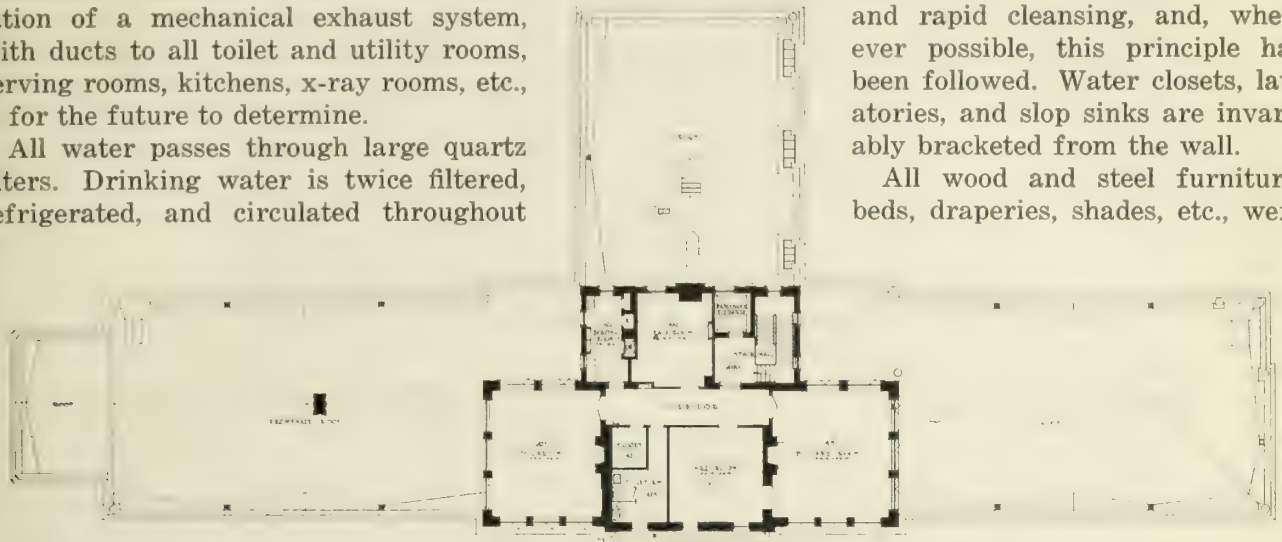


Fig. 11. Illinois Central Hospital. Fourth floor plan.

the house to drinking fountains and to pantries, kitchens, and utility rooms. A special fire pump, a fire alarm system, and a clock system have been

purchased and installed under the direction of the architects. The decision was early reached by the hospital authorities to eliminate as far as

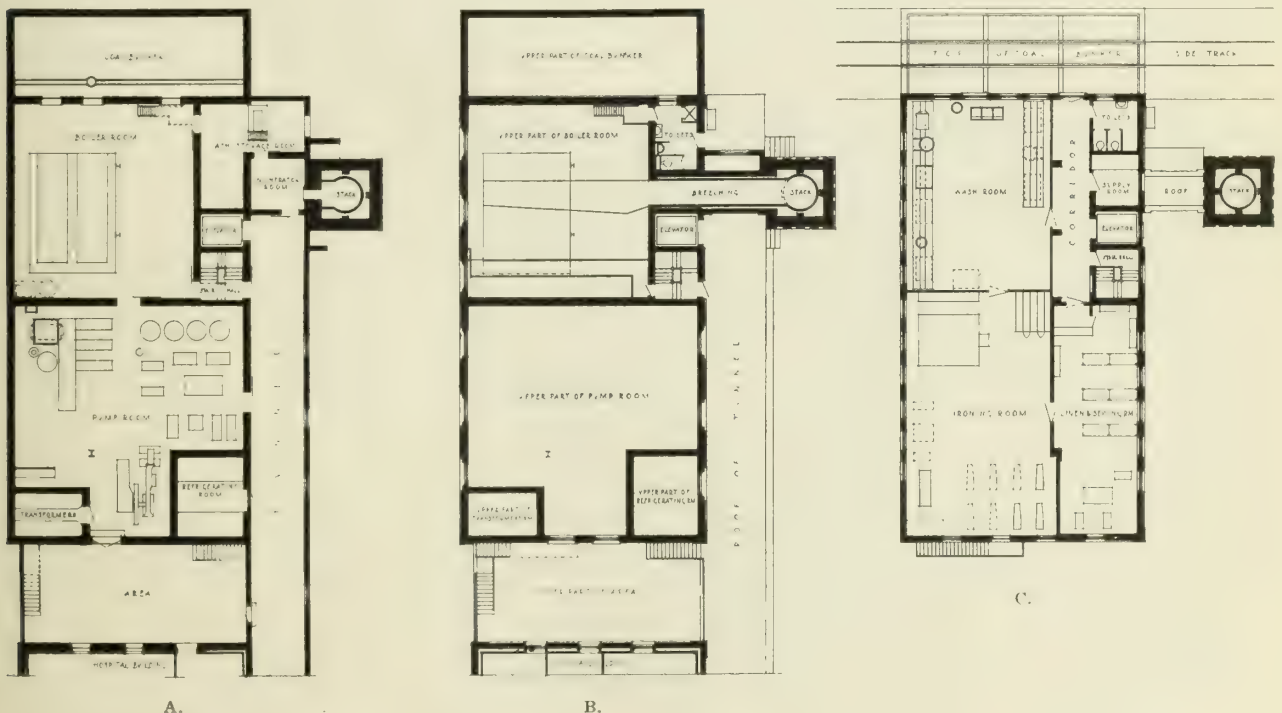


Fig. 12. Illinois Central Hospital. Power house and laundry. A—Basement plan. B—First floor plan. C—Second floor plan.

installed. The heating is by means of forced circulation of hot water.

All kitchen equipment, laundry machinery, hydrotherapeutic equipment, and sterilizers were purchased and installed from specifications pre-

possible the institutional air, and with this end in mind the white bed was tabooed. French gray enamel on steel has been used for ward beds, imitation mahogany on steel on private room beds, and bronze finished brass beds in rooms with

private beds. To harmonize with the French gray ward beds, a quartered oak, stained gray, has been used, while mahogany has been used in the private rooms and in business offices. The color of room painting harmonizes perfectly with the furniture, being in the pastel shades of pink, blue,

green, yellow, and gray. An innovation in the operating room furniture is the use of French gray finish instead of the usual white.

The illumination is by means of semi-indirect bowls in patients' rooms and direct illumination elsewhere.

INDUSTRIAL WELFARE WORK A FACTOR IN MODERN MANAGEMENT

What the Cadillac Motor Car Company Has Done to Improve the Working Conditions of Its Employees—How the Welfare Idea Grew From a Small Beginning to a Large and Methodical System—Its Beneficiary and Medical Plans

By J. M. EATON, MANAGER OF THE WELFARE DEPARTMENT

THE growth of the automobile industry has been so phenomenal, the rapidity with which motor car factories have been enlarged and extended and the speed with which fortunes have been amassed, have been so great that the general public, familiar only with the method of building big business by a slow and painstaking process, has come to believe that the great heads of these enormous enterprises must necessarily be more or less business buccaneers, fighting madly for supremacy, with little thought of the means used to gain the end desired—great wealth. Their attention has been called at various times and through various agencies to the spectacular achievements of the industry, to the vast number of automobiles turned out in a given period of time, the speed with which a motor car can be assembled, the thousand and one accomplishments of those cars which are advertised for their prowess at hill climbing or racing, and to the tremendous volume of the annual dividends paid by certain of the more successful companies in the field, while little or nothing has been said or published regarding the more intimate things of the business or the inner organizations and close cooperation between individuals, between employer and employee, that has made possible an industry so vast in its proportions as to be nothing short of awe-inspiring. Welfare or sociological work has within the past few years become so important a factor in the administration of these great organizations as to demand recognition and the careful consideration of all concerned.

It cannot be said that welfare work as practiced in manufacturing establishments of the present day is either wholly philanthropic or wholly economic. It may have been prompted either by a desire on the part of the employer to do something philanthropic, or solely because the employer had been told, or believed himself, that such work would bring him a profitable return in

increased efficiency and in a stabilizing of labor conditions in his plant. Whatever may have been the incentive for engaging in such activities, the result has been the same—a tangible saving to the employee and profit to the employer, though it is difficult to measure in money the profit accruing to the latter and a comparatively easy matter to compute in dollars and cents the saving to the former. In its relation to accident prevention, to increased efficiency, and to the minimizing of time lost through sickness, it represents to the workers of the country a saving of unbelievable sums of money annually. On the other hand, the physical, mental, and moral condition of an employee has much to do with the problem of accident prevention and the question of increasing individual efficiency.

Organized welfare work in the plant of the Cadillac Motor Car Company dates back about six years, having been given a name and place in that organization in 1910, it being apparent to the management that the unorganized manner in which the problem had previously been handled was not bringing to the men in the factory the measure of good result desired or to be expected from the amount annually expended. Later numerous requests from the employees for some sort of organized effort, in which they might participate, to eliminate the too frequently burdensome practice of "passing the hat" in cases of sickness or death among fellow-workmen, resulted in the forming of a benefit society. Still later an intimation on the part of many workmen that they would welcome anything which would enable them to secure a noonday lunch without having to patronize either the nearby saloon or the more or less high-priced public restaurant resulted in the present shop restaurant, with its variety of wholesome, well-cooked food at prices representing the actual cost of production. These and other activities were finally grouped under one head, and as a result we find the present welfare organization

divided into seven divisions. These divisions are accident prevention, fire prevention and sanitation, accident relief, benefit society, legal aid, restaurant and lunch counters, and accident claims.

The division of accident prevention is in charge

necessary, or uncalled for. The decision of this committee is final and binding on all concerned.

The division of fire prevention is so closely allied with that of accident prevention as to make it almost impossible to discuss the work of one

without bearing to a very large extent on the work of the other. This division is in charge of a fire marshal, who is a retired captain of the city fire department, and who has under his direction two assistants, whose duty it is to make periodical surveys of the works and to recommend to the foremen and department heads such steps as are necessary to eliminate or minimize the fire hazard. Orders covering fire hazards and methods to be pursued in eliminating such hazards are similar to those in use by the safety engineer, and an appeal from the decision of the fire marshal is to the same committee as that to which the safety engineer

makes his appeal, except that in cases of fire hazard the committee is known as the Fire Prevention Committee. The fire marshal looks not alone to the elimination of fire hazards, but is



Fig. 1. Cadillac Motor Car Company, Detroit. Plant No. 1. Main room of surgeon's office.

of a safety engineer, who, with his two assistants, has charge of all work looking to the elimination, in so far as is possible, of work accidents in the various plants of the company. He designs and installs such mechanical safeguards as may appear to him proper, and is the arbiter as to what is or is not safe manufacturing practice. On having called to his attention an unsafe condition which may be remedied by the installation of mechanical devices, he and his assistants proceed to the designing, building, and installation of such guards. Hazards which may be eliminated by some action on the part of foreman or superintendent are called to the attention of such foreman or superintendent by a written notice, which, in addition to suggesting what may properly be done in the matter, indicates the limit of time in which the hazard must be abated. Failure

on the part of the foreman to comply with the order of the safety engineer may bring him before a safety committee composed of factory executives, where he is given an opportunity to show, if possible, that the order is unreasonable, un-



Fig. 2. Cadillac Motor Car Company, Detroit. Plant No. 1. Type of equipment and eye treatment room in surgeon's department.

also the sanitary inspector for the plant. He has charge of the fire brigades, must approve the various types of gasoline and kerosene containers used throughout the works, and is authorized to order done such things as are obviously necessary

to the preservation of the plant, its equipment, and the health of the employees.

One of the most interesting divisions of the work in this organization is that of accident relief. This division is in charge of a chief surgeon, two assistant surgeons, and five trained male nurses, the most of whom are located at the works' emergency hospital at the main plant. Here are treated not only those injuries which are sustained by the men in the course of their employment, but also injuries suffered on the street and while at home, and a very large number of dispensary or sick cases.

The emergency hospital equipment is of modern type, the interior of the rooms being finished in white enamel, with granolithic floor, and provided with individual white porcelain pedestal wash stands, with foot control of hot and cold water and waste. A steam sterilizer capable of bringing cold water to the boil in forty seconds, and an electric dry sterilizer, provide the means for keeping instruments and dressings clean. A modern white porcelain operating table and white enameled steel furniture not only add to the attractiveness of the rooms, but serve also to make the whole outfit clean and free from danger of pus infections. An eye operating room is equipped with all the electromechanical apparatus necessary for the proper treatment of eye injuries.

In this hospital in a single year, in addition to the large number of minor injuries treated, there were cared for a total of 37,757 so-called dispensary cases, being cases of employees slightly ill who called for advice and medicine. In one winter there were treated more than 4,300 cases of grip, 6,250 cases of headache, and almost 800 cases of toothache. It is interesting to note, however, that during a twelve-month period only 437 cases of injury causing disability for one working day or more were treated, although in the same period there were treated over 40,000 cases of slight abrasions and more than 9,000 cases of foreign bodies in eyes, these eyes having under the Workmen's Compensation Act a potential value of from \$3,500,000 to \$9,500,000. The men are encouraged and urged to take their minor injuries to the doctor's office, thus minimizing the danger from infections, as well as permitting the doctor to ascertain the underlying cause of the accident and to advise the employee as to his general health, etc. In this manner the attention of a man is called to the danger of certain unapproved practices, and the importance of care and good judgment in preventing similar injuries.

Probably no division of the welfare work in the plants of this company has proved so great a di-

rect benefit to the employees as has the mutual aid or benefit society, organized January 1, 1913, which has paid to its members during the first three years of its existence over \$35,000 in sick, accident, and death benefits, accumulating in the same period a cash surplus of over \$12,600. Membership in this organization is voluntary, and about two-thirds of the entire force have taken advantage of the protection afforded through membership in it. A payment of 10 cents per week entitles a member to benefits for sickness or accident disability amounting to \$1 per working day over a period of twenty-seven weeks, or about six months, together with a death benefit of \$150. There is no initiation fee. The company pays all expenses of administration, so that every cent paid in by members goes to the payment of benefits and to the accumulation of a surplus. The society is in charge of a superintendent, who is also manager of the welfare department, and it is governed by an advisory committee composed of twenty employees of the company, ten of whom are selected by the management and ten elected annually from among those employees in the works who are members of the society. The superintendent is in general charge of the activities of the society, and makes all adjustments and settlements with sick or injured employees. An appeal may be taken from his decision in any matter to the advisory committee, and its judgment is final.

Membership in the benefit society means more, however, than the mere payment of sick and accident benefits, for the company, in appreciation of the desire of the employees to protect themselves against loss of time through accidents or sickness, has conditioned that certain other privileges shall be theirs if requested. A physician is employed, and devotes his entire time to calling on and treating medicinally those members who are sick and unable to go to the plant hospital for treatment, and in many instances this physician treats not only the sick employee, but members of his family as well, making no charge for the service. Those employees who are physically imperfect and require corrective surgical treatment, such as operations for hernia or appendicitis, are placed in a city hospital at the expense of the benefit society, and are there operated on by the company's chief surgeon. Endowed beds in a local tuberculosis sanatorium are open to members afflicted with the white plague who either do not see their way clear to go into a more favorable climate, or whose cases have become so far advanced as to make the moving of them to such climate unadvisable. Those employees who are tubercular, and desire to go away, are sent to a sanatorium in

New Mexico, where they are cared for by a physician employed by the company, the expenses for room, board, and nursing being borne by the company, the benefit fund bearing the expenses of such items as transportation, medicine, and par-

The division of legal aid is in charge of an attorney, whose services are at the call of the members of the benefit society, and who advises them in all legal matters in which they are doubtful. Through him foreign-born employees are assisted in securing citizenship papers, and all employees who so desire may secure assistance in legal matters. Employees are assisted in their negotiations for the purchase of property, abstracts of property are examined, and in case of garnishment proceedings they are advised and assisted in the adjustment of differences between themselves and their creditors. The welfare attorney does not in any case appear in court for an employee, but will in cases where it seems necessary for the member to appear in court refer him to a practicing attorney known for his willingness to deal squarely and fairly with clients thus sent to him.

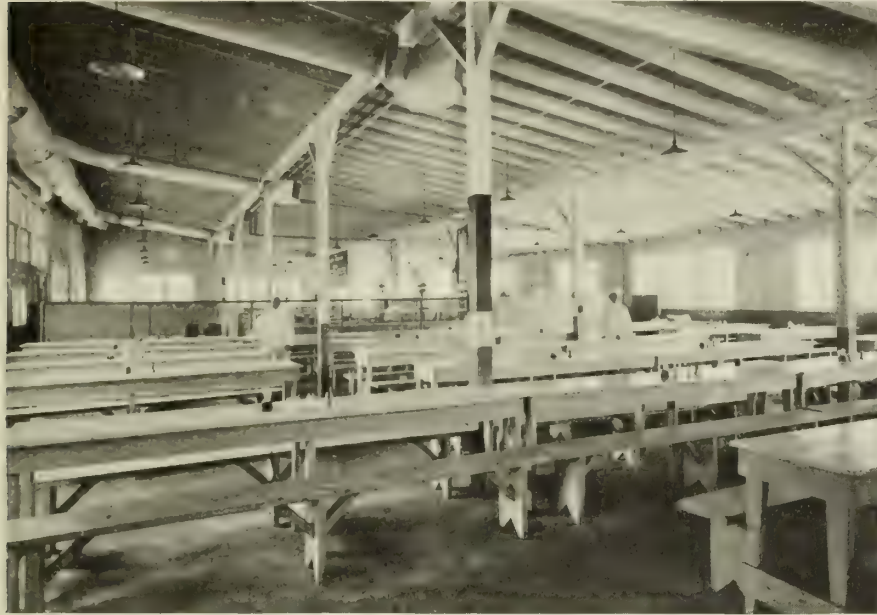


Fig. 3. Cadillac Motor Car Company, Detroit. Plant No. 2. Section of main restaurant. All portions are sold here at 8 $\frac{1}{4}$ cents.

tial support of the family left behind. The benefit society membership thus affords the employee low-priced protection against loss of time, and an interest in his physical welfare which could not be bought through the payment of any premium to any other sort of insurance society. It teaches its members the value of foresight- edness in preparing against the inevitable rainy day. It encourages contentment by teaching self-reliance, for the protection afforded them through the medium of the society is a return from the money they have themselves earned and invested. It teaches them the value of personal hygiene and right living through the medical and surgical department maintained by the company as a part of the society's administrative organization. It teaches independence and discourages dependence, and it is fast becoming a fact that in these works an employee who fails or is unwilling to become a member of this organization is considered by his fellow-employees as lacking the proper mental equipment of a working business man.

As previously stated, the desire on the part of the men who have some place where a clean and wholesome lunch might be purchased at a reasonable figure brought about the



Fig. 4. Cadillac Motor Car Company, Detroit. Plant No. 2. Section of main restaurant. All portions are sold here at 5 cents.

present division of restaurants and lunch counters. In the beginning the effort in this direction was confined to the serving at noon, and in the evening for overtime men, of a thick soup, or meat stew, in quart cups, a quart of the stew and

two slices of bread being sold for 6 cents. This was delivered to the various departments in the shops on trucks, the men eating at their benches or machines. This service rapidly became so popular as to demand some sort of a room in which the men might be served with greater dispatch and more comfort to themselves. Part of a large warehouse was, therefore, converted into a restaurant, equipped with long tables and benches painted a light gray and covered with white oil-cloth. A counter in the center of the room was made the distribution point, and, it being found that a quart of the stew being served was more than the majority of the men required, the quantity was cut in half and sold for 3 cents. From this beginning has grown in a year and a half the present two large restaurants, one housed in

whereby those who wish may secure superior service by paying 5 cents per portion for the same food that is sold for consumption at the oilcloth covered tables at 3½ cents. One side of this room is equipped with polished oak tables and steel frame chairs; here napkins are provided, iced water is on the tables; ketchup, vinegar, and mustard are provided; and the coffee and milk, instead of being served in bottles, as is done on the lower-priced side, are served in cups and glasses, and the patron has an opportunity to sweeten his coffee himself with loaf sugar, and is given a pitcher of cream, to be used or not, as he pleases, instead of having the cream and sugar previously put into the coffee, as is ordinarily done where it is sold at the lower price.

Contrary to expectation, this section of the restaurant has proven extremely popular, and is patronized not only by office help and foremen, but by the rank and file of machine shop and foundry laborers.

In connection with the restaurant activities, and in the belief that a little relaxation and refreshment at those hours of the day when industrial accidents are most frequent would tend to minimize the number and seriousness of such accidents, the practice of selling milk in pint bottles to the employees has been adopted at these hours. Between 9 and 9:15 o'clock in the morning and from 3 to 3:15 o'clock in the afternoon milk and butter-



Fig. 5. Cadillac Motor Car Company, Detroit. Plant No. 2. Service section of main restaurant.

its own building, and, in addition, the four lunch counters operating at the noon hour.

A steward is in general charge of the service, an experienced chef in charge of the kitchen, and a storekeeper and twenty-one men complete the organization. About 1,000 men secure their noon-day meal at one or the other of the restaurants or at the lunch counters. Both restaurants are operated on the cafeteria plan, and, in addition to the meat stew which still forms the main article of diet, there have been added side dishes of various kinds—salads, fruit, pies, coffee, milk, tea, etc.—each portion being sold for one ticket, which represents a value of 3½ cents. A strip of seven tickets is sold for 25 cents.

In the No. 2 restaurant, which is the latest to be opened and which is housed in a concrete floored building 50 by 100 feet, the interior of which is painted white, a plan has been adopted

milk are on sale at various counters throughout all the plants, the men being permitted to leave their work for the purpose of purchasing and drinking it. This milk is the best quality procurable, and after having been chilled is sold at 3½ cents per pint, which is a trifle less than its cost plus the handling. During a single year almost 456,000 pints of milk were sold in this manner, together with 265,000 pints of coffee sold at the noon hour. With the noon sales of milk and coffee there were sold in the same period almost 80,000 pies and more than 200 barrels of apples. The restaurant division of the welfare department alone does a gross business approximating \$50,000 annually. It is so handled that the loss of the company is comparatively small.

It is the belief of the management that by presenting to the men an opportunity to secure for themselves at cost, or a trifle under cost, such ad-

vantages as it is possible to secure through the medium of the welfare department, the number and seriousness of the shop accidents are reduced,

the men are in better physical and consequently in better mental condition, and the individual efficiency of all is materially increased.

YOUNGSTOWN SHEET AND TUBE COMPANY'S HOSPITAL

Conveniently Arranged and Handsome Edifice Is Initial Agency in Health Work For Large Number of Employees—Service Rendered Is Intensely Practical

By R. J. KAYLOR

THE new emergency hospital of the Youngstown Sheet and Tube Company is located a short distance from the main entrance to the works, and is not inside of the plant proper. The site selected was chosen because of its convenience and the fact that it was admirably suited to an

porting. The interior finish is of oak and birch, and the hardware used is of simple but handsome design.

The arrangement of the first floor is such that the building is divided into two portions—one for major first aid cases and one for patients visiting

the hospital for treatment or examination. In accordance with this plan, one entrance is provided for the ambulance, while another is for the patients above referred to. The front entrance is for attaches and visitors.

A portion of the basement is devoted to the bath or clean-up room, and a special system is provided by which privacy is secured. The physical examination room is also on this floor, and the remainder is given over to a well-equipped laundry, heating and ventilating apparatus, and similar purposes.

The first floor contains a waiting room, dispensary, and accident clerk's office, all arranged so that entrance is secured through a cor-

ridor from the wide stairway leading to the basement. This floor also contains the operating room, which is provided with the most modern equipment and arranged with a special view to sanitation. This room is tiled 8 feet from the

Fig. 1. Youngstown Sheet and Tube Company's Hospital.

institution of this character. Being outside of the works, it will simplify the admission of patients who are not actually employed by the company, it being the intention to extend the benefits of the institution to the families of employees as far as this may be possible. Abundant ground is a feature of the site.

The building is two stories in height, with a basement and attic. It is constructed of brick, steel, and cement, with a waterproof stucco treatment for the exterior walls, which are 85 by 40 feet in dimensions. The construction is fireproof throughout, and the heating, plumbing, and ventilation are the result of expert study of the problems involved. Floors are of terrazzo, with cove base, and are laid on concrete, with steel beams sup-

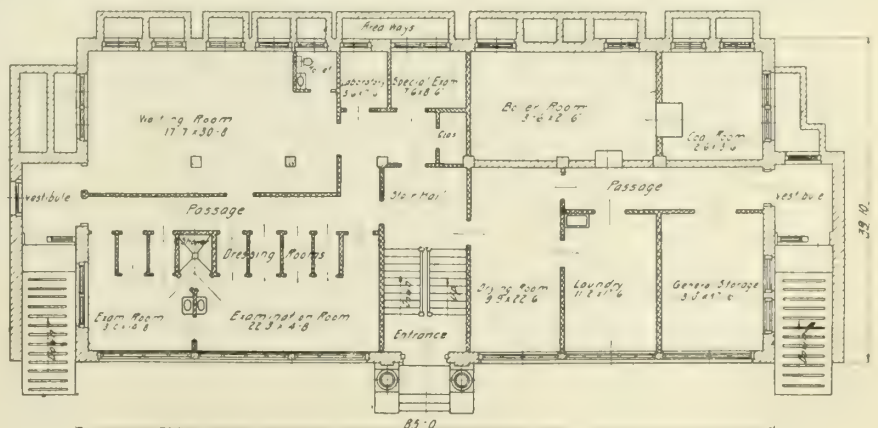


Fig. 2. Youngstown Sheet and Tube Company's Hospital. Basement floor plan.

floor, and provided with terrazzo floor and copper drains, so that it may be flushed with hot water and steam. It is lighted from the north in the most approved manner. Communicating with the operating room are the doctors' lavatory and the sterilizing room. The physician's private office and a well equipped x-ray room, with a 3-bed ward and general bath, complete the installation on this floor.

The second floor is arranged for the accommo-

The erection and equipment of the new hospital was undertaken with the purpose of extending to the employees benefits beyond the mere treatment of emergency cases, and has been carried out with this object in mind. While serious cases or either injury or illness will be sent to the base hospitals, where they can be given more efficient treatment, the plan is to furnish through the emergency hospital medical and surgical treatment for all cases of a minor nature among em-

ployees, and thus avoid the ill results so often accompanying neglect of these cases. The co-operation of the visiting nurses is expected to render this work most effective, and aid greatly in the humanitarian objects sought to be accomplished.

The Youngstown Sheet and Tube Company has always shown the most advanced interest in the physical well-being of its employees, and this hospital is an expression of this idea.

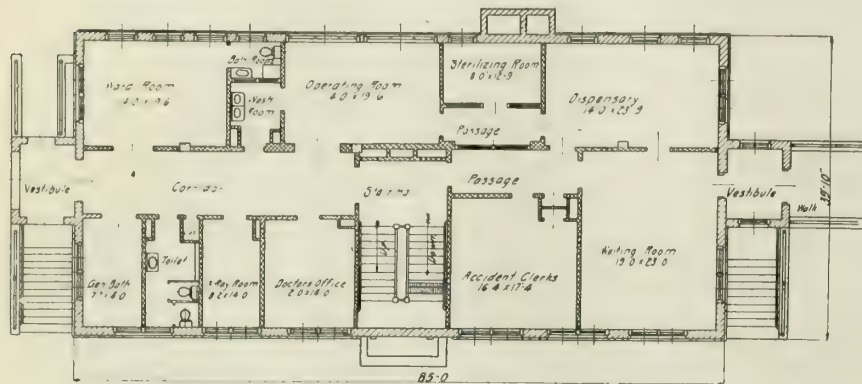


Fig. 3. Youngstown Sheet and Tube Company's Hospital. First floor plan.

dation of accident clerks, nurses, and physicians. The location of the hospital near the plant was considered advisable to make provision for the residence of the physicians and nurses, at least temporarily, and experience has shown that the accident clerks can work to best advantage in close touch with the physicians. This floor is provided with a common living room, bath, and bed rooms for the purpose outlined. The accident clerk's office occupies one end of the floor, and the other is arranged for a ward, and will be used by the visiting nurses for the present.

The hospital is not intended for the treatment of permanent cases of either injury or illness, these being, as soon as possible, sent to base hospitals at Youngstown; but from the emergency hospital will be extended to the employees that medical treatment which is necessary to complete recovery from minor injuries, as well as that service which will tend best to provide for the general health and physical well-being of the men and their families. In connection with this work a number of visiting nurses will be employed, and they will keep in close touch with the homes of the men at work in the mills, a large number of whom are of foreign birth, rendering to them such service as has been found most efficient along the line of extended welfare work.

The company recently vaccinated about 7,000 of its employees without charge, an epidemic of smallpox threatening the community, although no cases had been found among the men employed in its mills. This treatment was also given free of charge to all members of employees' families, who were only too willing to help in this precautionary effort, and the result was the stamping out of an epidemic that otherwise might have been serious.

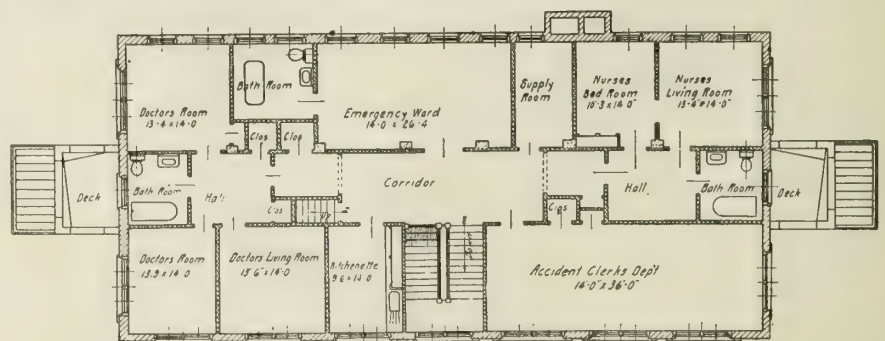


Fig. 4. Youngstown Sheet and Tube Company's Hospital. Second floor plan.

A hospital is being built at Atlantic, Ia., by the Atlantic Hospital Association. It will be a three-story and basement brick and stone structure, 82 by 37 feet, and will have a capacity of 30 to 40 beds. The cost, including heating, plumbing, and wiring, will be approximately \$25,000. On the first floor will be located the superintendent's office, a large waiting room, a diet kitchen, and several private rooms for patients. The second floor will be taken up almost exclusively by private rooms and wards. An operating suite, separate wards for men and women, nurses' quarters, and a solarium will make up the third floor. In the basement will be the kitchens, the laundry, and a few nurses' rooms. An electric elevator will run from the basement to the top floor.

CLOAK, SUIT, SKIRT, DRESS, AND WAIST INDUSTRIES

Development of the Welfare Work of the Joint Board of Sanitary Control of New York City in Certain Industries—Sanitary Standards Carefully Prepared and Systematically Introduced—Caused Laws to Be Passed for the Safeguarding of Workers

By GEORGE M. PRICE, M. D., DIRECTOR

THE protocol is based on the fundamental principle that the welfare of an industry is the concern of the manufacturers, the workers, and the public, and therefore the Joint Board of Sanitary Control represents these three elements, the organization of the board being based on the interdependence of these interests in industry.

Beginning in 1911 with a simple investigation of the sanitary conditions of the shops in the cloak and suit industry, and, later, with the establishment of sanitary standards accepted by the industry, the work of the board has gradually extended until it has embraced a number of functions in the self-sanitation of the industry.

The work of the board has progressed and developed. It began with a formulation of the sanitary standards, carefully prepared by experts in cooperation with the members of the board. The results of the inspections instituted by the board, and supported by the manufacturers' association and the union, have effected a very decided improvement in the condition of the factory. The board has improved conditions not only from a sanitary point of view, but from the point of fire prevention. The organization it established has enabled the industry to use the best expert service to comply with the sanitary standards embodied in law. The department in charge of fire drills has helped manufacturers to comply with the law. Moreover, the improved sanitary conditions in garment working have been of great service to the machinery of the government concerned with the enforcement of legal sanitary standards for factories.

A very important step in the development of the board has been a systematic attempt to give the workers a physical examination and to consider the effect of industrial conditions on the health of the workers. Another great advantage of this representative industrial management, in my judgment, is that the results have been brought about not only through effective machinery established by the board, but through the gradual and increasing recognition of the need and importance of these standards.

The board has gradually awakened an intelligent public opinion among the workers and manufacturers, which has greatly aided the board in

enforcing standards. This is one of the chief advantages of representative industrial management. The enforcement of standards is no mere mechanical process—it is a process of education. We are confident that the achievements of the board will result in the extension of this method of sanitary control in other industries. The work of the board, therefore, has not only a local, but a national, interest.

The scope and functions of the board are at present controlled by five distinct, yet interdependent, departments or divisions:

- A. Sanitary inspection.
- B. Education.
- C. Fire protection.
- D. Medical work.
- E. First aid and nursing service.

A. SANITARY DIVISION

1. Scope and functions of the sanitary inspection of shops:

- a. Annual.
- b. Semiannual.
- c. Division of shops into class A, B, C, and D.
- d. Monthly reinspection of B and C shops.
- e. Weekly inspection of D shops.
- f. Inspection of new lofts leased by manufacturers.
- g. Investigation of complaints.
- h. Advice to manufacturers in complying with orders from the labor and fire departments.
- i. Certification of shops complying with the standards of the board.

2. The work done:

	1911	1912	1913	1914	1915 ¹
Inspections and reinspections made.....	7,286	12,657	8,982	9,703	4,288
Complaints investigated	107	168	111	79	101

The following are the sanitary standards of the Joint Board of Sanitary Control in addition to the provisions of the municipal health and fire departments and to the labor laws of New York state:

1. No cellar or underground story the ceiling of which is less than 7 feet above the adjoining ground may be used as a workshop.
2. Workshops located in rear houses, attics, or converted tenement houses must have a special permit from this board.
3. All machines and other appliances which are in use must be placed so as to have sufficient natural or artificial light at all times, the board to determine in individual cases in regard to all complaints concerning insufficient light.

¹To October 22, 1915.

4. All lights must be so placed as not to glare in the eyes of the workers; they must be at a distance from the operative and well shaded.

5. All shops should be properly aired during noon pauses by opening windows and doors. During the hot

of the benefits of better sanitation of the shops and health of the workers.

Our methods of inspection are different from the ordinary methods of inspection of state and municipal departments. Inspectors are instructed to establish and maintain friendly relations with employers and with workers. No attempt is made to come in at unexpected times to find violations and to penalize manufacturers for them. The function of the inspectors is to prevent violations instead of merely detecting them. The principle which is emphasized is not detection of sanitary crimes, but prevention.

Since 1914 a lecturer has been engaged whose duty it is to visit shop meetings, talk to the workers on sanitary matters at these meetings, and also to conduct noon lectures in the shops.

Various bulletins issued from time to time and distributed in large quantities among the workers also tend to spread education on sanitary and health matters. During 1915 a special bulletin on fire protection was issued for the manufacturers, and a special



Fig. 1. Joint Board of Sanitary Control, New York. Lunch room for employees.

season in the summer there should be placed in the shop a sufficient number of electric fans for the purpose of ventilation.

6. No irons heated directly with coal or gas tubes may be allowed in the shops. Wherever gas irons are used, they must be supplied with air pressure; they must be properly adjusted and the pipes made gas-tight.

7. Each shop should have a special caretaker for the cleaning of floors and water closet apartments.

8. Each shop should be provided with an approved first aid medical service kit.

It is recommended that proper and sufficient lunch accommodations should be provided apart from the work benches and machines, the owner to be responsible for the cleanliness and sanitary condition of the lunch counter.

B. EDUCATIONAL DIVISION

In its first annual report the board emphasized the importance of educational activities and propaganda as a basis for the enforcement of labor laws having to do with safety and sanitation. This policy was adhered to during the last five years, the greatest attention having been paid to the spread of knowledge among manufacturers as well as workers of the importance and



Fig. 2. Joint Board of Sanitary Control, New York. Approved rest and emergency room in factory.

bulletin, entitled "Workers' Health Bulletin," was issued in English, Yiddish, and Italian, and 70,000 of these bulletins have been distributed among the workers in the shops.

1. Scope and functions of the educational division:

- a. Interviews with employers.
- b. Conferences with labor leaders.
- c. Friendly talks with manufacturers and workers.
- d. Annual reports.
- e. Irregular bulletins.
- f. Lectures on sanitary subjects before sections and locals.
- g. Noon lectures in shops.
- h. Lectures at shop meetings.
- i. Appointment of sanitary shop committees.
- j. Official exhibits.
- k. Papers and talks at conferences and conventions.
- l. Papers and letters in trade press.
- m. Interviews with employers.

C. FIRE PROTECTION DIVISION

Careful attention has been paid by the board since its organization to the work of fire preven-

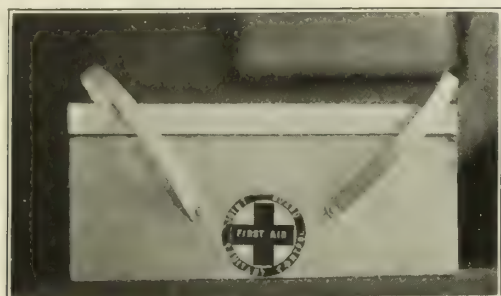


Fig. 3. Joint Board of Sanitary Control, New York. Compact first aid case, closed.

tion and the safeguarding of the workers against the dangers of panics and fires in the shops. Immediately after the general inspection of the industry in January and February, 1911, and before the fires of the Wolf and Aasch building during that fateful winter, the board presented to the municipal authorities a list of buildings in which

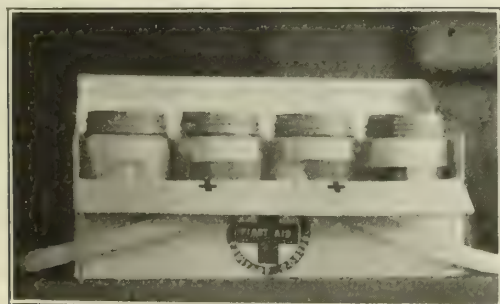


Fig. 4. Joint Board of Sanitary Control, New York. First aid case, open, showing jar dressing containers.

unsafe conditions were found by its inspectors, and the attention of these authorities was drawn to the fire dangers in these buildings. Since its organization the board has made strenuous efforts to combat the indifference of the public to the important problem of industrial fire protection, and has worked with the various authorities

in the efforts for the safety of buildings and for the prevention of the results of panics and fires. The inspections made by the board were directed to discover the defects in buildings which would make them unsafe in case of fires, to the inadequacy of exits, to the improper placing of fire escapes and drop ladders, to the abolition of fire trap exits, to the widening of aisles in shops, and to the increase in the protective measures against fires in buildings.

The board was instrumental in having passed by the Legislature the bill creating the New York State Factory Investigating Commission, and there has hardly been a movement in the state and city for the safeguarding of workers which has not had the active participation of the board or some of its members.

When the Legislature passed the fire drill law, imposing the duty on the owners of shops to conduct monthly fire drills in their shops, the board organized a fire drill division, with a force of drill masters, and has succeeded in inducing 282 manufacturers (322 shops) to conduct and maintain monthly fire drills. While this law is practically a dead letter outside of our industries, and there are hardly 100 fire drills conducted throughout the whole city in other industries, the fire drill law is obeyed in at least 400 factories belonging to our industries. Beginning with 1916, arrangements have been made with the two manufacturers' associations to maintain drills in the shops of each and every one of their 600 members.

1. Work of the fire drill division:

- a. Monthly fire prevention inspection.
- b. Initial instruction of employees as to exit and escape.
- c. Monthly fire drills.

	1913	1914	1915
Shops having fire drills conducted....	259	334	322
Total number of drills conducted.....	640 ¹	3,580	2,779 ²

D. MEDICAL DIVISION

Early in 1912 the board decided that the sanitation of the industry could not be carried on successfully without an endeavor to improve the health of the workers at the same time. In order to ascertain the health conditions among workers in the trade, a preliminary examination of 800 workers was made in 1912, which investigation disclosed the prevalence of many physical defects among workers in the trade and a greater incidence of pulmonary tuberculosis than should be expected in the industry. Since that time an agitation has been strenuously carried on among the various locals belonging to the International Ladies' Garment Workers' Union to establish physical examination of workers, to induce the various

¹From October 1, 1913.

²To October 1, 1915.

locals to adopt some means by which sick members could be assisted, and to devise a scheme by which members of the unions suffering from tuberculosis could be taken out from their shops and be properly treated during a certain stage of their disease.

In March, 1913, Local 35, consisting of 10,000 members of the Pressers' Union, was the first to adopt a tuberculosis benefit provision, which consisted in taxing members of the union \$1 annually and assisting each member of the union suffering from tuberculosis with \$150 to \$200 for the cost of a sojourn of from ten to twenty weeks at a sanatorium in the Catskill Mountains. Since that time Local 9, consisting of 12,000 tailors and finishers, and Local 23, consisting of 7,000 skirtmakers, have also adopted a tuberculosis benefit provision. In 1914 Local 35 also adopted a sick benefit provision, paying \$5 a week for ten weeks to members of the union suffering from some acute disease.

The examination of all members of the union and the supervision and control of the various tuberculosis and sick benefits in the locals is done by the medical division of the joint board of sanitary control.

1. Scope and functions of the medical division:

- a. Physical examination of any member of the Unions.
- b. Examination of candidates for admission to Locals 35, 9 and 23.
- c. Examination and supervision of sick benefit of Local 35.
- d. Examination and supervision of tuberculosis benefit of Locals 35, 9 and 23.
- e. Supervision and control of tuberculosis members of Locals 35, 9 and 23.
- f. Special dental examinations and advice.
- g. Special eye refraction examinations and advice.
- h. Special lung and heart examination.
- i. Fluoroscopic and radiographic examinations of chest.

During the present year the work of the medical division has been greatly increased, and a large number of medical examinations are made in the office. Advice is also given by the physicians of the board to all workers who come for examination. The offices of the board have been greatly extended, a complete set of modern diagnostic instruments has been installed, and thorough examinations are made by the physicians of the board, including special fluoroscopic and radiographic examinations. The board also employs a dentist, an oculist, and a lung specialist for special examinations in these branches. During the summer of 1914 the United States Public Health Service conducted over 3,000 physical examinations in conjunction with the medical division of the board.

2. Work done:

	1912	1913	1914	1915
Persons examined.....	800	1,234	4,547	4,196 ¹
Persons found suffering from tuberculosis	13	71	93	43
Sick benefit members of Local 35 examined .....	....	....	326	647
Tuberculosis members of Locals 35, 9, and 23 examined and supervised .....	....	....	....	22

E. FIRST AID AND NURSING SERVICE DIVISION

During 1915 the Industrial Board of the State Labor Department established a rule that "in every factory employing more than ten persons in which power-driven machinery is used for manufacturing, there shall be provided a first aid kit at all times free of expense to employees," and each factory should also employ a physician or nurse to instruct workers in the use of the first aid equipment. In order to enable the manufacturers under the jurisdiction of the board to comply with these rules and regulations of the Industrial Board, a first aid box specially adapted for the needle trades has been devised, and 500 of these boxes were manufactured, filled, and sold at cost price to the manufacturers in the industries.

The Dress and Waist Manufacturers' Association has also consented to pay for the service of a trained nurse, who is appointed by the board and supervised by the Nurses' Settlement, of 265 Henry street. The nurse makes monthly visits to the shops, instructs responsible employees in the use of the first aid box and its contents, makes a general inspection of the health conditions of the female workers, and gives from time to time such advice to them as is necessary.

A number of changes have recently taken place in the administrative staffs of the various Illinois state hospitals. The changes began when Dr. P. M. Kelly, superintendent of the Kankakee hospital, resigned on account of ill health. To fill this vacancy, Dr. R. A. Goodner, superintendent of the hospital at Anna, was transferred to Kankakee. Dr. G. W. Morrow, assistant superintendent of the Anna hospital, was also transferred to the Kankakee institution, and Dr. Eugene Cohn, assistant superintendent at Kankakee, was made assistant superintendent of the Chicago hospital. Other transfers have been made as follows: Dr. S. W. McKilvey, assistant physician at Anna, to the same position at Kankakee; Dr. H. J. Smith, assistant superintendent of the Chicago hospital, to the Anna hospital as assistant superintendent; Dr. J. A. Campbell, from the superintendency of the Watertown hospital to the superintendency of the Anna hospital; Dr. Charles F. Read, assistant superintendent of the Chester hospital, to the Watertown hospital as superintendent; Dr. Isaac Fremmel, assistant superintendent of the Chester hospital, to the Lincoln School and Colony as assistant superintendent; Dr. C. V. Caldwell, assistant superintendent of the Lincoln institution, to the Peoria hospital as assistant superintendent.

St. Margaret's Hospital, Montgomery, Ala., is making extensive improvements, including the erection of a new pavilion for negro patients.

¹To October 26, 1915.

WELFARE AND EFFICIENCY ACHIEVED AT THE SAME TIME**The United Shoe Machinery Company Applies the Same Business Principles to Its Employees That It Applies to Its General Business—Protection, Comfort, and Convenience the Chief Objects—The Result Is General Welfare and Human Efficiency**

BY WILLIAM H. WALSH

IN a journey from Boston twenty miles north to the city of Beverly, Mass., one will see from the train windows to the left the tall chimneys and buildings of the United Shoe Machinery Company's plant, which covers an area of 300 acres. This may give some idea of the probable number of workshops that make up the plant, but will not give a proper conception of the business itself, nor of the physical and moral welfare of the 4,600 persons employed.

In order to obtain a clear realization of the company's attitude toward welfare conditions, it will be necessary to pay a visit to the shops, get a mental picture of the immense factory, inside as well as out, talk with the employers and employees, and see how well the buildings are lighted, how they are kept clean, safe, and sanitary, and judge the measure of welfare and efficiency that the United Shoe Machinery Company considers essential to the maintenance of good physical, mental, and moral condition on the part of its workmen.

Recognizing that good health is one of the prime essentials to good work, that it is the easiest thing to lose and the hardest to regain, the aim is to neglect nothing that will contribute to that condition. This proposition is not in any sense a charity, nor is it purely philanthropic. Good health is not something that can be bought at the drug store, and, moreover, it is the first requisite of the efficient worker. These facts are self-evident, and for that reason the company was quick to realize their practical value. Its first aim was to provide plenty of sunlight and an abundance of fresh air, both of which have been obtained. The sixteen buildings, constructed of reinforced concrete, have 75 percent of wall space devoted to windows, through every inch of which the sunlight enters, and, in addition, for the sun does not always see fit to shine, the whole plant is flooded with electricity. Not only are the lamps placed so that they radiate light generally, but individual lamps are provided, with protecting eye-shades, on every machine, ready for use at all times. Moreover, the atmosphere is kept scrupulously clean, and by the use of powerful suction fans every particle of dust is drawn upward and away from the operators' lungs.

As the visitor goes through the various rooms

during the busy workaday hours he cannot fail to be impressed by the various devices that are seen for eliminating dirt. For example, seeing the immense lathes, bed planes, screw machines, etc., with all their iron and steel shavings and dust, and oil automatically supplied in streams, the wonder grows how it is possible to eliminate the floating and flying grime; yet the floors are as clean as those of the average public hall or school room. The work benches are clear of every speck of dirt or scrap of metal, except the metal which is being fashioned and the tools absolutely necessary. The secret of all this cleanliness is obvious, for at intervals along the various floors are to be seen men with brooms and baskets sweeping up the waste, dust and dirt almost as soon as it falls. In addition, there is provided an exhaust system in connection with all the polishing and grinding machines, by which means every particle of dust or flying scrap is sucked into large pipes and then shot down—or, more properly, blown down—to the separator, to be later carried to and burned under the boilers. The scrap which is thus collected is, therefore, reclaimed and serves as fuel, thereby furnishing a concrete example of that efficiency which is everywhere apparent.

Coming to the screw machinery room, which undoubtedly affords the maximum opportunity for dirt on account of the great quantity of oil that is constantly applied to the steel cutting process, the floors and all the surroundings are found to be scrupulously clean—in fact, correspond in that respect with the rest of the factory. Here, as in other parts of the establishment, wherever the oil escaping the guards drips on the floor it is washed off with a preparation of soda water, which is constantly supplied from a huge vat in the center of the room.

Nor is this all, for, in addition to the constant washing and sweeping, there is also a new sanitary device for caring for the refuse of the factory. This consists of small trucks of galvanized iron, with two compartments approximately 14 inches square and 26 inches deep. One compartment is filled with clean sawdust, while the other contains a supply of empty paper bags, with twine cut the proper length for tying up the bags after they are filled with the sawdust removed from the

cuspidors. In operating the device, the porter picks up the galvanized iron cuspidor, scrapes out the refuse sawdust with an iron scraper into a funnel made of the same material as the cuspidor and directs it into the empty bag, after which he

The United Shoe Machinery Company has provided a water supply system that is the acme of perfection—the last word in shop systems. It consists of an engine, a dynamo, a pump, a refrigerator tank, and a Loomis filter. The pump drives the water into the filter, where pulverized charcoal and ground quartz purify it. Then it drives the water into the refrigerator tank, where it is chilled to a delicately cool temperature and ready for distribution through pipes to the fountains throughout the shops.

Of equal, if not paramount, importance to the drinking system are the systems of light and air, heating and ventilation. So perfect are the arrangements for all this at Beverly, and so necessary do the officials of the United Shoe Machinery Company consider the physical health of their employees as the first requisite of their efficiency, that nothing has been neglected to bring those systems up to the most exact modern re-



Fig. 1. United Shoe Machinery Company, Beverly. Wash room, with sanitary basins, automatically filled and emptied.

takes a scoopful of the clean sawdust and fills the cuspidor anew. When the bags are filled, they are taken to the boiler room and burned. There are cuspidors on the floors of all the rooms, at irregular intervals, for the use of all employees. All day long the porters are kept busy with their trucks, brooms, and mops gathering the refuse, so that not a particle of it remains on the floors.

The next step in the sanitary arrangements noticed on a tour of the great plant was the system of filtering, cooling, and distribution of drinking water in the work rooms. Just here the improvement is so remarkable as to be in the nature of a revelation. The man with a long memory will say that during his earlier years the drinking water in the average factory was kept in a bucket, and machinists and shoemakers, in common with the ordinary workman, drank out of a tin dipper. Now all this is changed. The tin dipper has given place to a bubbling fountain, where each man may drink at his pleasure, assured that he is partaking of water filtered and cooled in the purest manner.

quirement. Evidently believing implicitly in the divine command, "Let there be light," the sixteen buildings, constructed of reinforced concrete, have, as stated above, 75 percent of wall space for



Fig. 2. United Shoe Machinery Company, Beverly. Treatment room in the emergency hospital.

windows, and individual lamps, with protecting eye-shades, are provided for every machine. So, too, in the matter of ventilation the provision made has been adequate. In each of the wings A, B, C, and D are air shafts running from roof to

basement, through which cool, fresh air is drawn. In cold weather the air passes into an inclosure containing steam-heated coils and is made warm, and an adjacent fan draws this hot air from around the heated coils and discharges it throughout the building. At each air shaft is an opening of 9 square feet, providing for the expulsion of foul air, and there are four such openings on each floor.

The system of ventilation applies to the toilet rooms, wash rooms, lockers, and shower baths. The wash rooms contain individual basins, which are automatically filled and emptied, tempered water being used; while the toilets and urinals of the most modern type are installed in light, airy rooms, kept scrupulously clean. The same modern methods of cleanliness and sanitation pervade the shower baths and baths for female employees,

airy room, amply lighted and well equipped with all the hospital essentials, including even a lung-motor and an x-ray machine, ready for use. A doctor is in attendance, who is always present during working hours, ready to attend to accidents at a moment's notice. Fully nine-tenths of the accidents at the factory are of a trivial description. As showing the extraordinary care which the company takes to guard against accidents, the incident was cited where, after the state inspectors had approved the safety devices employed, the management appointed a special committee, consisting of a representative from each department of the factory, which made further recommendations. It was found that within a year from then the number of accidents, in proportion to the number of employees, had been reduced more than 73 percent. Such a condition

makes one think of the difference, amounting to a positive revolution, between the old-time machine shop, with all its possibilities for accidents, and the materialization of modern thought in factory equipment. Surgery has indeed come to be the handmaid of mechanics, the former including in its operation all the appliances to meet every emergency.

There is one department which gives even greater occasion for the making and distribution of dirt, dust, and cinders than the screw machine room—the blacksmith shop; but the same system is employed here as



Fig. 3. United Shoe Machinery Company, Beverly. Club house of the United Shoe Machinery Company's Athletic Association.

which are provided with all the accessories of a first-class hotel. Here, as throughout the factory, the air is perfectly fresh and free from odors, dust, gases, and impurities, while all the foul air is expelled as scientifically as it is possible for human ingenuity to devise.

Of course in a plant as large as that of the United Shoe Machinery Company, employing close to 5,000 men, the liability of accidents is necessarily large, but, according to statistics at the factory, it was found to be surprisingly small. So many protective and safety devices have been installed that the number of really serious accidents has been reduced to a minimum. Nevertheless, when an accident occurs, though it be only the getting of a particle of dust in the eye of a workman, he is compelled by the rules to report at once to the emergency hospital in the factory. This emergency hospital is a large, clean, and

in the other departments—that is to say, the exhaust plan, by which the suction fans carry off all particles of dust as soon as created.

So it is in the drop forging department, where all the forging is done, and where forged articles are made from a size as small as the end of a lead pencil to those of large dimensions. Here, too, the same minute attention to the details of cleanliness is given as in all the other departments, and the same system is in vogue. It is the same in the foundry and in the boiler room; and, in fact, in all the rooms of the gigantic plant everywhere the atmosphere of cleanliness, of efficiency, and the elimination of dirt, the preservation of the health and welfare of the employees is apparent.

When the men come pouring out through the great center doors at noon and wend their way to their homes, they are as cleanly and tidy, and

about as well dressed, as the average clerk or business man. It is plain, too, that they take time to wash up, for their faces and hands bear unmistakable evidence of the fact. Quite a number of the men remain to lunch in the factory, some partaking of it in the lunch room provided in the building, where they can eat a hot lunch at little more than cost, while others sit around on the work benches and eat the lunch they bring with them. The majority of the workers, when they wash up at quitting time, change their overalls for their street clothes, leaving their discards in their lockers, and go forth looking neat and clean.

The toilets, lockers, and wash rooms are convenient to the men on entering and leaving the factory, are all sanitarily equipped, contain individual sanitary basins, are automatically filled and emptied, and in every way thoroughly up to date. Moreover, it is arranged that there shall be individual lockers for every one of the thousands of employees.

In caring for the welfare of the men, the most painstaking efforts have been made for safeguarding the lives of all, and the safety devices installed are not only the most modern, but also the best that could be devised. Geers, shafts, pulleys, and belts are all carefully guarded, so as to prevent the possibility of injury to the worker, and the greatest attention has been given to this problem in all its phases. Ample protection from fire is assured, for there is a fully equipped fire department always ready for an emergency.

Once outside the factory, it is apparent to the ordinary observer how much attention is given this question of welfare work, for he sees on all sides in the gently sloping, well-kept lawns, with flowering plants and beautiful flowers, the same idea of efficiency and service that marks the factory inside.

Let the visitor go a step farther and inspect the Country Club House belonging to the employees of the company. He will be astonished at the beauty of the location, the apparent luxury and expansiveness of the surroundings, and the architectural gem of the club house itself. Standing on the front veranda, one may look at the broad expanse of athletic grounds, acres on acres of fields, where baseball, football, cricket, field sports, track sports, and everything else in the way of athletics are indulged. At the side of the house are the tennis courts, while around the corner are the golf links, stretching as far as the eye can see. The cost of the club house was something over \$35,000. It was given to the employees of the company on December 30, 1910, and is managed by the United Shoe Machinery Athletic Association. Inside the club house are bowl-

ing alleys, billiard and pool tables, a large reading room, furnished with lounging chairs and tables, and supplied with the latest magazines and periodicals; also a dining room, a dance hall, and a perfectly appointed theater, with all the accessories. It is quite natural to ask what is the cost for membership, and one will be surprised when told that for all the privileges of the club the fee is but \$1 a year. Another thing—it will not be necessary to inquire what is the great day at the club grounds, as someone is sure to mention that day. It is "Sam Sam," the great annual day of days, when all roads around New England lead to Beverly and to the grounds of the Country Club, when the Sam Sam celebration is apt to be honored by a visit from the governor of the commonwealth and scores of other less notable state or city officials; but the best description of it falls short of realization.

If, in conclusion, any words of philosophy were permissible as explaining further the principles of welfare which characterize the vast industrial plant at Beverly, it would be well to quote from Aristotle that its plain object and ideal is "to work for worthy ends," with a view to the happiness, the contentment, and the mental, moral, and physical efficiency of all concerned.

EXAMINE PEDDLERS FOR DISEASE

New York Health Department Plans More Convenient Methods For This Important Work

The occupational clinic of the Division of Industrial Hygiene of the Bureau of Preventable Diseases has recently established an auxiliary clinic at a store situated at 49 Lafayette street, Manhattan, and another at 381 Fulton street, Brooklyn, where peddlers applying for licenses are submitted to a medical inspection very similar to that which obtains at the Federal quarantine station. In this way the work of the division has been made a part of the office of the Bureau of Licenses, doing away with a considerable amount of hardship for the thousands of peddlers of all descriptions who apply for licenses, and effecting a great economy both in time and energy. Within the past six weeks nearly 19,000 individuals have been passed on in this way. At the same time special examinations of industrial groups and food handlers can be carried on at the occupational clinic without the confusion and interruptions that were inevitable when large numbers of peddlers invaded the clinic.

The physicians assigned to work in these new offices established by the Bureau of Licenses select those individuals who present any indication of marked malnutrition, skin eruption, or other condition which may excite suspicion as to the presence of tuberculosis, syphilis, other infections or venereal disease, and refer them to the occupational clinic, where they are submitted to a thorough physical examination, and where proper laboratory tests can be made if necessary.

The Rolston Hospital, El Paso, Tex., is occupying a new building erected and equipped at a cost of over \$100,000.

LOOKING BEYOND THE DOOR OF WELFARE SERVICE IN THE DEPARTMENT STORE

How B. Altman & Co. Meet a Situation Arising in a City of New York's Complex Environment—Some Results of the Campaign of Education on the Part of Its Medical Department—Recreation and Luncheon Features—School and Vocational Classes

By ANNE KENDRICK WALKER

TO the student of the welfare movement the conditions out of which it grew and the conditions making for its fuller development are deeply significant of the entire industrial organization, and nowhere, perhaps, are the conditions more interesting than in a city of New York's complex environment. Any single effort, therefore, to meet a situation in a city where the flames of industrial unrest are being continually fanned by unseen currents is an expression of an age fully alive to its responsibilities and keenly alert to a movement which seeks a proper economic adjustment of industrial relations.

Has anyone the idea, however, that welfare work is like a huge cornucopia, scattering gifts, and the hungry and the thirsty and the hard-working being suddenly filled? Or does welfare service appear as an investment on which satisfactory returns are expected by corporations or other business organizations? Or has welfare work been established on a routine so broadly educative that we are now able to see beyond the door and no longer question?

The time has come when we want to get away from any false reasoning. If too much stress has been placed on the benefits derived by the employees, while all the expense is borne by the employer, we should make it clear that welfare service is nothing if not benevolent; and if too much has been said of the returns that the investment yields to the employer, we should try to make it equally clear that welfare work is ineffectual unless it does yield returns on the investment.

Which are the greater, the benefits or the returns? Who shall decide? Not the employer. The world is too quick in misjudging, too eager in arriving at conclusions before hearing the important witnesses; and, besides, the question has already been answered and answered infallibly. We can read the answer in the eyes of the anemic girl in business; we can hear it in the step of the young boy, with holes in his shoes, and who is the sole breadwinner of his family; we can hear it echo in the tubercular cough of the frail young creature who is sent away to the country for a rest.

In presenting some phases of welfare work of B. Altman & Co. for their several thousand em-

ployees, why should these alone answer the question? Are not these isolated cases? you ask. Well, what of the young woman who goes up to the emergency hospital established by this company and complains of a sore throat? The house physician sees diphtheritic symptoms and orders immediate isolation. What of the girl, standing for hours behind the counter, unconscious of the insidious disease that has laid its hand on her? What of the hundreds on the anemic list? What of those suffering with neuritis? What of those with fallen arches and unable to obtain proper braces? What of those with weak eyes? None of these cases is isolated. They were selected at random from the files of the medical department, which has always been a part of the welfare work of B. Altman & Co., and which treats between 400 and 500 employees weekly, the record for the year ending December 31, 1915, containing over 18,000 cases.

But the emergency hospital and the medical assistance given employees are only a part of the Altman welfare work, of which not a single feature is isolated, but coordinate with all. Every department is adequately equipped, scientifically managed. The luncheon arrangements, the recreation rooms, the library, the school, the vocational classes—step by step has the work progressed from that early and modest beginning in the old Eighteenth street store, where Benjamin Altman laid the foundation. If an idea was worth the nurturing, Mr. Altman saw that the roots were dug around—that it did not die from neglect. His plans were far-reaching—the highly developed efficiency of the present welfare work is the result of those earlier ideals to a large extent, but the general scope of the present activities is due to the well-wrought purposes of the present administration.

Mr. Michael Friedsam, the head of the house, is a welfare enthusiast. He has made it possible for welfare work to reach thousands with its reassuring and cheering message. His mental grasp of the work has made for its broadly scientific development, has lifted it to a dignity as part and parcel of a great business organization—with departments working in harmony, in charge of welfare experts.

Take the methods and equipment of the medi-

cal department. A physician is on active duty a part of each day and two graduate nurses of wide hospital experience are on duty all day. A history is kept of every case, is filed alphabetically with the card index system, and all subsequent

even the prevention and arrest of communicable diseases, but what interests me intensely is the number of young people who, through the assistance of the medical department, are able to keep on with their work. Hundreds, on the verge of a breakdown, haunted by the fear of long illness, of having to give up altogether, have been built up, put on a proper diet, and escaped serious breakdowns. Where employees are underweight, anemic, milk is supplied free. Any medicine prescribed is also supplied free. No tax of any kind is ever imposed. Cases like these, together with the campaign of education which so directly affects the public health, interests constantly and gives a peculiarly vital significance to the daily routine."

Passing on to the rest and recreation features and to the educational departments, some idea of the scope of the work may be gained by the number of floors

treatments are entered on the back of the card. No case is too trivial to be treated. Cases are followed carefully and urged to return for observation. The campaign of education is no small part of the work. One of the results is shown in the fact that when the hospital was first opened, the number of infected fingers from the prick of pin tickets was very large. The records now contain only rare cases of infection from neglect. In point of equipment the emergency hospital has two wards, with a total of 7 beds. There is a consulting room and a surgery, which is equipped down to the smallest detail.

"But the human side of welfare work," some one said to the house physician. "I want to know something of the human side."

"The 'human side?'" he repeated. "Why, there isn't a day that does not teem with the 'human side.'"

"But your own experiences? What is the most interesting phase of welfare work in a large department store?"

"What is most interesting to me is not always the treatment of the ordinary illnesses of life, or

devoted exclusively to the use of the employees. The store occupies an entire city block, and three floors, with their immense area, are utilized in the welfare plan. On the eleventh floor are spacious and separate rest rooms for men and women.



Fig. 1. B. Altman & Co., New York. First aid room.



Fig. 2. B. Altman & Co., New York. Ward in the emergency hospital.

Comfortable chairs, couches, writing tables, floods of sunshine, charming views over the roofs of New York, a quiet spot in which to sew, read, or chat, write letters—this is the atmosphere of the recreation rooms.

On this floor also are the class rooms for the younger employees who have entered business before graduating from the grammar and parochial schools. The school is affiliated with the public school system. Here also is the library,

couches; and here the young girl, the older woman, come during the busy day, where, undisturbed by even a whisper, tired nerves relax and courage comes back for the duties, not alone of the routine of business, but the larger duties that

require courage when the day is done. Beyond the silence room is a large sun parlor, opening on an open-air promenade, a portion of which is reserved for a smoking room for men employees.

With each step having been made with the view of meeting the exigencies of an extensive plan of welfare service, a pertinent question may come from certain quarters. There may be some who wish to know if the employees "support" the plan with enthusiasm, or only half-heartedly. The statistician can answer in some degree.

We have already seen that over 18,000 cases were treated the past year in the medical de-

partment of this company. Twenty-five hundred employees are served with luncheon daily. Over 2,000 girls and women use the recreation rooms daily; an approximate number of boys and men avail themselves of the rest and recreation priv-

which is open at regular hours every day, and here are the vocational training classes, where instruction is given in various subjects that make for efficiency.

The luncheon arrangements on the twelfth floor are ideal. As essentials, there are sunlight and air on all sides. The floor is tiled. The tables are covered with white glass. In the center of the restaurant are two large steam tables, from which are served hot, palatable, and nutritious luncheons. The menu is changed daily, but the prices, which are nominal, remain the same. The spacious kitchen is a marvel of scrupulous care. The floor is bright with red Dutch tiles, and there is a wainscoting of shining white tiles, with painted walls above. The cooking utensils are of aluminum. There are exhaust fans for withdrawing vitiated air. Refrigeration, filtration of water, fountains well distributed, an incinerator, are among the important features of interest in safeguarding the health of employees.

On the thirteenth floor is a great "silence room," furnished with many chairs, inviting, with

ileges; 500 employees are members of the library; 75 of the younger employees attend school; the vocational classes are overflowing.

"How do you like the school?" was asked one



Fig. 3. B. Altman & Co., New York. Rest room for women.



Fig. 4. B. Altman & Co., New York. Kitchen. Floor laid with red Dutch tiles, wainscoting in white tiles, with painted walls above.

of the boys, who had made a particularly bright record.

"Great!" he answered, his eager eyes glowing with enthusiasm. "Great! I only wish it lasted all day!"

In an article of this character it is only outward manifestations of welfare work that can be presented. There is, however, a far more intimate side that few are privileged to touch on. This intimate side is known only to the welfare director and to those who direct her administrative offices. The work of the welfare director,

who has been in charge of the work since its early days, touches most closely the lives of hundreds and hundreds of young women who come to her for counsel. This side need not be discussed here, but it goes beyond even food, medicine, rest—the something that not only sustains life, but puts into that life the thing that makes for self-respect, for independence, for happiness.

These are some of the ideals on which the Altman welfare work is based—ideals which foster mutual relationships and which help to higher levels of usefulness.

WELFARE WORK IN A BOOKBINDING ESTABLISHMENT

How the J. F. Tapley Company Improved the Working Conditions of Its Employees— A Contrast Between Present and Past Methods

PRIOR to 1912 any kind of welfare work in a bookbindery, particularly in New York city, was unknown. Employees were forced to work under whatever conditions were found in the various plants, without regard to fresh air, sanitation, and health and accident requirements, which the factory inspectors were somewhat lax in enforcing.

With the inauguration and immediate success

books, removed their plant from 33 Bleeker street to 531-535 West Thirty-seventh street in 1905, leaving a then antiquated building for a modern steel and cement structure, with every known facility for clean, hygienic, and modern plant operation. In accordance with the factory laws at that time, a room was prepared having a window opening to the outer air and not on an airshaft, with a couch and easy chairs, for cases of slight illness of male or female employees, which numbered 250. This equipment was sufficient for a number of years, but, with the increase of the organization to 350 employees, about 60 percent of which were women and girls, the need of greater space for cases of sudden illness or accident and a desire to be of more personal service to the employees resulted in the setting aside in the latter part of 1911 of a larger room, with three outer windows, and fitted with an equipment of cot, cabinet, and emergency table, chairs, screen, etc.



Fig. 1. J. F. Tapley Company, New York. Emergency room.

of welfare work in some of the department stores, factories, and large office organizations employing female help, a general activity became apparent throughout the establishments of the better organized and more considerate manufacturers after a careful observance of the state factory laws and an investigation of the good results accruing to both the employer and employee from the installation of a properly organized welfare department.

The J. F. Tapley Company, manufacturers of

A short time after this larger room had been prepared, it was decided to create a closer bond of unity between the employer and employees by installing a registered trained nurse, who had been engaged in welfare work in one of the large department stores. The work of the nurse developed rapidly until, in addition to attending to the usual cases of illness, minor injuries, accidents, etc., it included the calling on sick employees at their homes, the administration of simple remedies, talks on hygienic living and dressing, and established practically a personal

contact with each female employee which was not possible previously. Dry clothing was provided for the girls in case of inclement weather when arriving in the morning, and thus have dry clothing in which to work during the day.

A vacation savings fund was started, which enabled employees, particularly the less experienced girls working for a minimum wage, to save sufficient during the year to permit a short annual vacation. A branch of the New York Public Library was installed for the convenience of all employees, and the number of books used weekly was most encouraging. A special library of technical books on trade topics was collected, which gave the men, particularly the younger and less experienced ones, an opportunity to improve their positions.

Instead of sending all first aid cases to the hospital, it was possible through the services of the trained nurse to treat all minor accidents in the emergency room, and, by encouraging the employees to consult the nurse in cases of slight illnesses, the general health of the entire organization was improved.

The welfare department also tabulated and kept certain records on the employees, covering past experience, period of service, promptness, and health, and made general recommendations for advancement in meritorious cases. In short, this department attended to matters pertaining to the relation of the employer to the employee where an intimate knowledge of the condition and disposition of the employee was advisable. Under this arrangement the cost, including interest on the investment, depreciation of the equipment, salary of the nurse, and the expenditure for medical and other supplies, averaged for 400 employees approximately \$5.20 a year per employee.

American Association of Industrial Physicians and Surgeons

On Monday, June 12, at Detroit, Mich., there was organized a new medical association known as the American Association of Industrial Physicians and Surgeons. This organization was the result of the preliminary work during the year of ten or twelve industrial surgeons scattered throughout the country who have felt for some time the need of an association of men doing this special kind of work. The preliminary meetings were held in Chicago, and a charter was secured last spring under the laws of Illinois.

The first annual meeting was held at the Hotel Cadillac, in Detroit, on June 12, and almost 200 members were present, there being 250 charter members on the membership list. This membership list is growing, and by the time of the next annual meeting there is expected to be a membership of at least 500 or 600.

The objects of this association are to foster the study and discussion of the problems peculiar to the practice of

industrial medicine and surgery, to develop methods adapted to the conservation of health among workmen in the industries, to promote a more general understanding of the purposes and results of the medical care of employees, and to unite into one organization members of the medical profession specializing in industrial medicine and surgery for their mutual advancement in the practice of their profession.

The conservation of life by the prevention of disease and accidents among employees is the keynote to all industrial medical and surgical work. New problems are constantly arising in the experience of every physician engaged in this work, and this association will offer the means of meeting and deciding these problems by standardizing the methods used, so that the work will result in the greatest good to the employees, the employers, and to humanity in general.

Some of the problems that are up for immediate discussion and decision are:

1. Medical examination of employees; the results and the exact benefits of this procedure.
2. Preventive surgery, and the surgeon as an aid in preventing accidents.
3. Emergency surgery and standardizing the proper treatment in certain types of emergency cases.
4. Standardizing the records used in this work.
5. Various forms of industrial insurance and the need of a federal health insurance law.

Officers elected for this association are: president, Dr. J. W. Schereschewsky, United States Public Health Service; first vice-president, Dr. Robert T. Legge, Berkeley, Cal.; second vice-president, Dr. Francis D. Patterson, Philadelphia; secretary-treasurer, Dr. Harry E. Mock, Chicago.

The board of directors consists of Dr. T. R. Crowder, Pullman Company, Chicago; Dr. R. W. Corwin, Colorado Fuel and Iron Company, Pueblo, Colo.; Dr. Harold M. Clarke, Crane Company, Bridgeport, Conn.; Dr. W. Irving Clark, Norton Grinding Works, Worcester, Mass.; Dr. A. M. Harvey, Crane Company, Chicago; Dr. C. E. Ford, New York; Dr. Otto Geier, Cincinnati Milling Machine, Cincinnati; Dr. H. L. Cameron, Republic Rubber Company, Youngstown, Ohio; Dr. C. J. Farnum, Avery Company, Peoria, Ill.; Dr. G. L. Howe, Eastman Kodak Company, Rochester, N. Y.; Dr. F. C. Warnshuis, Pere Marquette Railroad, Grand Rapids, Mich.; Dr. J. E. Mead, Ford Motor Company, Detroit, Mich.

The next annual meeting will be held in New York on the Monday preceding the opening of the convention of the American Medical Association.

The following is the program of the meeting:

MORNING SESSION

Dr. A. M. Harvey, chief surgeon National Malleable Castings Company, acted as temporary chairman, and Dr. Harry E. Mock, chief surgeon Sears, Roebuck & Co., acted as temporary secretary.

10:00 a. m. Organization meeting—Report of organization committee, reading of constitution, general discussion of plans, appointment of committees, election of officers.

11:30 a. m. "The Scope of Medical and Surgical Supervision," Dr. C. G. Farnum, chief surgeon The Avery Company. Discussion—Opened by Dr. Francis D. Patterson, chief Division of Industrial Hygiene and Engineering, Department of Labor and Industry, Pennsylvania.

12:30 p. m. Luncheon at the Cadillac Hotel.

AFTERNOON SESSION

2:00 p. m. "The Educational Function of Industrial Physicians," Dr. J. W. Schereschewsky. Discussion—Opened by Dr. Wilber E. Post, chief medical director People's Gas Light and Coke Company.

3:00 p. m. "The Factory Doctor," Dr. S. S. Marquis, physician Ford Motor Company. Discussion—Opened by Dr. R. L. Cameron, chief surgeon Republic Rubber Company.

4:00 p. m. "Health Insurance and the Prevention of Sickness," John B. Andrews, Ph. D., secretary American Association for Labor Legislation. Discussion—Opened by Dr. C. D. Selby, Commissioner of Health, Toledo, Ohio.

EVENING SESSION

7:00 p. m. Banquet at Cadillac Hotel. Toastmaster, Dr. Sidney M. McCurdy, chief surgeon Youngstown Sheet and Tube Company. There were no set speeches, but a number of short talks by Dr. Joseph C. Bloodgood, Baltimore; Dr. W. A. Evans, Chicago; Dr. John Dodson, dean Rush Medical College; Dr. W. T. Brown, Valmora, New Mexico, and others.



The
MODERN HOSPITAL

Editorial Office . . . 6 North Michigan Ave., Chicago
Business Office . . . Metropolitan Building, St. Louis

EDITORS.

Henry M. Hurd Fidelity Building, Baltimore
Frederic A. Washburn . . Mass. General Hospital, Boston
Winford H. Smith . . . Johns Hopkins Hospital, Baltimore
S. S. Goldwater Mt. Sinai Hospital, New York
W. L. Babcock Grace Hospital, Detroit
John A. Hornsby . . . 6 North Michigan Ave., Chicago

SUBSCRIPTION.

Under domestic postage, \$3.00; foreign postage, \$3.50 (14 Shillings). Single copies 35 cents.

Domestic rates include United States, Cuba, Mexico, Porto Rico, Canal Zone, Hawaii and Philippines.

Contributors, subscribers, and readers will find important information on advertising page 34.

The Conservation of the Health of Industrial Workers

Who is responsible for the health of the worker in industry—the state, the employer, or the employee? To this question various answers have been given. The collectivist, believing in social responsibility, argues for paternalistic control; the individualist, on the other hand, true to his principles, pleads for a minimum of governmental or other interference. Through the clouds of discussion there may be discerned a general approval of efforts to enhance the worker's efficiency, while in actual practice there is a steady drift toward industrial organization for the promotion of health.

By common consent there are certain evils which the people, speaking through government, stand ready to forbid. Thus the sanitary code of the city of New York declares it to be the duty of employers to provide means to prevent occupational diseases. By incorporating this demand in the sanitary code, the New York City Board of Health gave legal expression to the undoubted wish of all right-minded citizens. Specifically, the sanitary code declares that "every employer shall provide reasonably effective devices, means, and methods to prevent the contraction by his employees of any illness or disease incident to the

work or process in which such employees are engaged."

To laws and ordinances of this character must be credited much, but by no means all, of the notable improvement in workshop sanitation which has been effected in the United States during the past decade. Yet such laws are not always of great value. The enactment of laws of this kind in response to an insistent public demand is one thing; their enactment at the behest of an inspired reformer, and in the absence of widespread interest in the object at which they are aimed, is quite another; and it is far from surprising that, in certain localities, preventive regulations designed to control grave occupational hazards are more honored in the breach than in the observance. On the other hand, we can, happily, point to many employers who, not waiting for legal compulsion, have diligently sought for their employees the highest measure of safety.

It will be conceded by everybody that definite noxious influences must not be allowed to play havoc with the health of workers. Indifference to such influences cannot be tolerated, nor deliberate neglect condoned; the dollar must not be placed above the man. For each industry there should be an appropriate sanitary regimen, and no business must be conducted in a manner which is unmistakably prejudicial to health. It is from this point of departure that industrial welfare work commonly proceeds. On entering the wide field of industrial social service, programs begin to differ and paths to diverge. Here, both in theory and in practice, socialistic and individualistic tendencies manifest themselves. Not the least pronounced among the individualists is the worker who resents all offers of aid, however well intentioned.

It is difficult to quarrel with the manly spirit of the worker who protests against inquiries into the state of his health, and who, especially, repels all attempts to investigate the life he leads outside of the factory. He contends for what he regards as an inalienable right—the right to do himself an injury if he so chooses. Employers who seek to improve the welfare of their employees must reckon with the opposition of stiff-necked men of this stamp. To overcome it, they must be absolutely sincere in their purpose to render service; moreover, they must "make good," for in the last analysis they will be judged by what they succeed in doing, and not by what they attempt to do. Cooperation, frankly offered, is probably the best means of combating the opposition of the extreme individualist. Let the workers themselves participate in formulating the welfare program and

in controlling the machinery of its administration, and a large part of their opposition will be dissipated.

It is impossible, within the scope of this article, to discuss the merits of the numerous industrial welfare programs which are now being tried out; one can refer only to the general aims of the movement. While the greatest stress is commonly put on the promotion of physical efficiency, this is sought by humanitarians, not as an end in itself, but because through the conservation of health the life of the individual acquires a richer and more valuable content. From quite another angle the welfare movement is ardently supported by the advocates of national preparedness, who perceive that, through the conservation of individual strength and power, the nation will be enabled to assert itself and to act effectually in time of need, and, finally, the industrial health movement has a friend in the enlightened seeker after profits.

It is not necessary to inquire too closely whether industrial welfare work is motivated by a desire for profit, by an ideal of national efficiency, or simply by human sympathy. Its goal is the health of the worker, and its byproducts include a certain measure of human happiness, as well as increased earnings, and an enhancement of national power. It is a happy moment in the life of the nation which finds so many forces combined in a movement of such paramount value.

Of one thing I am convinced—namely, that any health movement will be abortive which limits itself to the consideration of but a single phase of the life of the individual. Health hazards are to be found in the home as well as in the shop. Health may be injured by contaminated food, or by lack of food, as well as by foul air; by immoderate drinking as well as by fatigue; by crowded cars as well as by crowded and ill-ventilated shops. The health program must, therefore, be comprehensive.

It is essential, also, to understand that health cannot be given, but must be taken—that it must be sought, won, and preserved through intelligent self-help. It is the duty of public officials and of employers to establish and maintain wholesome environmental conditions. On the worker devolves the duty of profiting by the opportunity which is given to him. He can be stimulated and guided, of course, and more and more does he receive the necessary prompting. It is significant that a constantly increasing proportion of the activities of health departments are devoted to education in personal hygiene.

Preventive medicine will be more and more suc-

cessful, but it will never wholly succeed; its ideal is unattainable. When all known preventive measures shall have been taken, disease will remain. One of the most difficult tasks of the social worker is to bring medical science and art into satisfactory relationship with disease. Given a concrete case of illness in a person possessing slender material resources, and lacking intelligence to seek really competent diagnosis and treatment, can such an illness be handled in a manner of which we need not be ashamed? Are the chances in favor of or against effective treatment? By this test the medical part of industrial welfare work must be judged. If it does not meet the test today, it is partly because our passion for service has not been sufficiently aroused! Are we sincerely endeavoring to give to the industrial worker the full medical benefits which we covet for ourselves?

In so far as our failure is a moral failure, it may be corrected by the will. But there will remain the task of perfecting medical administration, and to this complex but fascinating task THE MODERN HOSPITAL and its coworkers must address themselves in the months and years that are immediately before us. S. S. GOLDWATER.

The Visiting Nurse in Industry

The first industrial visiting nurse in the United States was engaged in 1897 by a New York department store to watch its girls' rest rooms and to visit sick employees in their homes. For a long time the average industrial nurse was a middle-aged, eminently respectable woman, clad in a nurse's uniform, whose duties made her matron of the women employees and usually kept her in their rest room. Recently the industrial visiting nurse has been described as the interpreter of employer and employee to each other—the connecting link between the home and the workshop. In some cases she undoubtedly is, in others she is, unfortunately, just another person on the pay roll. That there are many nurses ill equipped to shoulder the important responsibilities intrusted to them, no one in touch with the demands of a nursing field will deny, but this is a truism applicable to all lines of effort nowadays.

A good visiting nurse, well trained in hospital and district work, with intelligence to apply her knowledge to each concrete case of illness or need, and vision enough to see the economic background in which the firm or the employer or the employee is but a unit, can do much for her patients, their families, and their firm. Her duties combine home nursing care and practical advice regarding

the prevention of illness, restoration to health, homemaking, housekeeping, and budget spending, as well as the promotion of lunch rooms, rest rooms, library stations, first aid, etc., in the factory.

The amount of work that such a nurse is able to accomplish depends both on her own ability and on the willingness of a firm to carry out her suggestions for the benefit of the employees. A well-equipped nurse is rarely willing to stay with a firm that does not wish to make her work count in the employees' behalf. She does not consider herself engaged simply to do minor dressings and make the firm look interested in the welfare of its employees—she wants to work with a live concern whose interest in this welfare is as sincere as it is constructive.

A visiting nurse's knowledge of existing agencies, free dispensaries, hospitals, convalescent homes, and relief societies, and her ability to secure more considerate rates for dental work or much needed medical or surgical treatment, are not, as a rule, shared by nurses whose work has kept them closely confined in hospitals or dispensaries.

Occasionally we are told that employees do not wish welfare work; given higher wages, they will better their own conditions. Welfare work, whether medical or otherwise, done by a firm that refuses a living wage to its workmen is a truce with darkness. It would be a poor type of nurse who would lend her training and brains to further such iniquity. Employees are human beings, who resent a paternalism which, in its destruction of a sense of personal responsibility and initiative, is just as harmful as a total disregard of the workers' well-being. The unfortunate feature of such welfare work, whether in colleges or workshops, is that its administrators are more frequently "well-meaning" than selfish, but the term "well-meaning" is not one that an up-to-date American business man likes to have applied to any department of his work.

The presence of the visiting nurse in home or workshop is rarely resented if her first interest is to restore order in a disorganized household, and to make the employee happier and therefore more efficient. A healthy workman is a good investment for himself as well as his employer, and, apart from the moral obligation of every man to his employees, there is an economic side to this preventive work that raises it above the level of philanthropy or purely picturesque welfare work. Well people are more contented as well as more vigorous, and, in spite of pessimistic croakings to the contrary, the strong laborer can find as much pleasure in his work as can the man higher up.

A good nurse is sure of her welcome if she is allowed to occupy a neutral position that will enable her to see both the employer's and the employees' viewpoint. Her vision will become warped if she sees only with the eyes of the employment manager, or if her unbalanced sympathy enables her to get simply the viewpoint of a disgruntled employee.

Industrial nursing must be established primarily for the employee's benefit. At best, the week's pay envelope stands between many families and want. The loss of a full day's pay is not a thing to be borne lightly by any worker. The weight of illness and sorrow which the average family bears bravely would be overwhelming if some helpful hand were not stretched out to ease the burden. But the manner in which this help is given is important; the employer should not give it as a gratuity, the employee should not demand it as a right. If it can be given so that loyalty to the firm as well as self-respect may be maintained, nothing but the right sort of appreciation will be felt on both sides. A good visiting nurse ought to be able to carry this sense of obligation and sympathy and interest from the shop to the home; and, far from creating ill-will, she ought to be able to make the warmest sort of feelings exist between the employees and their employers.

The woman able to establish and maintain this sense of mutual obligation and dependence is not an average person. She should be a well-trained nurse, a graduate of a good school, experienced in visiting in the homes of small wage earners, with some knowledge of social work. She should be a student of books as well as of people; she should have a personality that makes her equally welcome in the office of the president or in the home of the office boy; she must like people for themselves. She must do the work primarily because of her interest in it—not because it is to her simply a means of existence. Women of this stamp are not easy to find—they are not commonly found in industrial nursing because so many openings are constantly coming to them that the salaries and opportunities offered by corporations are far below those offered in other positions.

Too often an industrial visiting nurse is but a well-trained, well-intentioned woman, with no special preparation for an important piece of sociological endeavor. Such a nurse can do good work, but she rarely can do the big constructive piece of honest welfare work desired by most employers. The position of visiting nurse for any firm should be one of dignity as well as of re-

sponsibility. No nurse should be engaged because her knowledge of illness and minor accidents may enable the firm to dispense with the services of a paid physician, for a nurse is not trained or licensed to practice medicine. Neither should she be engaged to follow up absent employees who are suspected of malingering, nor can she do the best work for employees if she spends the better part of her working day in a little dispensary waiting for accident cases. A comprehensive plan of good industrial visiting nursing includes a staff of nurses large enough to enable the firm to have a nurse on hand for emergencies and other nurses for home calls.

The complexity of modern industry—the advent of foreign-born men and women, the introduction of powerful machinery, the strenuous, if unavoidable, competition, the deadening “system”—all these conditions help increase unrest and misunderstanding among the enormous body of American workingmen. We must put a new valuation on a vigorous, healthful life. Existence alone is not enough. “Safety first” implies sane welfare work. This means that the employer is willing to recognize that his employees are human beings, worthy of his respect and not unable to respect themselves. The advent of the visiting nurse in industry means that this better understanding between firm and pay-roll will come about more rapidly if the right sort of graduate nurse is put in charge of the welfare work that every firm will eventually desire to give its employees.

EDNA L. FOLEY.

Death of Dr. Paul Paquin, Noted Health Commissioner of Kansas City

Dr. Paul Paquin, director of public health of Kansas City, died in that city on June 22 from a disease supposed to have been tuberculous in character, probably tubercular meningitis.

Dr. Paquin was a Canadian, 56 years old, a graduate of McGill University of Montreal, and had fought tuberculosis ever since his graduation. He had studied under Pasteur, Latteux, and other famous European teachers. After a post-graduate course in histology at the University of Missouri, he inaugurated the first hygienic laboratory in that state as secretary of the State Board of Health, and did much for the regulation of the sale of meats and other food stuffs. It was said that he founded the bacteriological laboratory of the Battle Creek Sanitarium, and later moved to Asheville, N. C., where he conducted a tuberculosis sanatorium for seventeen years.

He had lived in Kansas City only fifteen months, having moved there to become the city's

health officer. He cleaned up Kansas City, built a splendid tuberculosis hospital, set in motion a department for the teaching of sanitation in the public schools, provided for a new and efficient method of garbage disposal, and secured almost a blind cooperation in his efforts on the part of the people of Kansas City, to whom he had be-



DR. PAUL PAQUIN.

come an inspiration. Dr. Paquin leaves a wife and one daughter, Mrs. B. M. Williamson, of Philadelphia.

When Dr. Paquin went to Kansas City as its chief health officer, he did so in the face of a tremendous political opposition, and during the incumbency of that office he fought politics and cleaned the health department of its insidious influence as completely as he had cleaned the city of its dirty streets, bad sewage, and unhealthful conditions. Before his death, politicians had come to realize his worth and were heartily and enthusiastically supporting his efforts.

It is not many men who are given an opportunity to be of service who have taken so tremendous advantage of it and who have done so much.

The Aims of Industrial Welfare

Welfare systems comprise the organized efforts of employers to render services to their employees above the payment of wages. Practically all large industries have made some efforts to better their employees' conditions. The National Cash Register Company, of Dayton, Ohio, is probably the pioneer in these efforts. Among public utilities, telephone companies are the pioneer welfare workers, chiefly because of the large number of young women employed in this industry. No welfare system is perfect, for even the

idea behind welfare work is new and largely in an experimental stage.

The subjects that concern the average worker are subsistence for the day for self and dependents, provision for the future for self and dependents, and—far below these two—amusement and recreation.

Immediate subsistence is provided by the employment itself. The service an employer can render the employee to lighten the work of the latter is to make working conditions as sanitary, convenient, and comfortable as possible. Endurable sanitary arrangements are almost universally compulsory by state laws, and medical examination and supervision of employees should be equally as necessary. To have apparatus and tools and surroundings convenient is a very slight exhibition of business acumen, and to have any tool other than as convenient and practical as possible is a losing financial proposition. The same considerations apply to comfort. The greatest practical convenience and comfort profits the employer by increasing efficiency and consequently increasing profits.

Provision for the future is a more serious consideration. Old age and loss of capacity to earn is the fate of every worker whose life is not cut off by premature death. It is an old thought that nothing is more certain than death, nor anything more uncertain than the time of death. The normal employee must plan for a normal length of life, and provide for self and dependents for the time when old age or its alternatives come on him. The best provision for this time may fail through no fault of the planner. Large families, long and serious illness, accidents, unfortunate investments, may wipe out a life's savings at the time they are most needed. The greatest service the employer can render his employee is to so arrange conditions that the employee may be spared the otherwise impending burden. Affairs in modern industries are so rushed and so exacting that they rapidly consume the best part of a worker's life after years of preparation, and, except in rare cases, there is no further use for the wornout worker. The industries accumulate funds to provide for depreciating machinery and obsolete plant, and will utilize waste as much as possible. Morally and socially it is just as necessary to utilize the waste of workers and provide for the depreciated human machines. This will be accomplished either by the action of all employers or by the power of the state. Where the state intervenes to make such provision, it generally goes further and takes the industries themselves to guarantee the provision, as in the case of the German empire today. A great number of the industries of our

country have responded nobly to this human need, and make liberal provision for the wornout or injured worker, as is shown by the articles published in this journal on this subject.

Provision for the future can be made in two ways—by direct additions to the savings of the employee and by funds accumulated for this purpose by the industry and by it applied for the benefit of the employee when needed. Examples of direct additions are the profit-sharing and stock-selling plans. The phase of the accumulated fund is well illustrated by the pension, sickness, accident, and death benefit funds of the American Telephone and Telegraph Company. It is conceivable that a combination of the two methods would be more advantageous than either separately. Both have numerous advantages and some disadvantages, and which one would be advisable in a particular case would depend largely on the employees and the industry itself.

Amusement and recreation is a third, but minor, part of an average person's concern. Associations and family ties often supply these without assistance from the industry. Some feature of this character is always desirable to provide the proper esprit de corps and loyalty to the industry. A fault with many welfare systems is that they confine themselves too exclusively to this feature and do not provide sufficiently for other more important parts of possible welfare work.

The industry's obligation is not covered by merely paying wages and directing works. It uses up human life, and it is therefore morally obligated to protect what it cannot use in the individual worker's life after extracting the serviceable and leaving only waste. Welfare work is a recognition of this fact, and is an endeavor to remedy this defect of modern industrial life. Many industries have done much—much more remains to be done. The majority of the great industries are studying this important proposition in its various ramifications, and are experimenting with possibilities to ascertain and follow the best methods of ameliorating the condition of their employees. It is hoped that the brief description of the welfare systems of some of the industries in this issue may be of material assistance to all in their individual attempts.

JAMES P. DUNCAN,
Chicago Telephone Company.

A New Department—Industrial Welfare

THE MODERN HOSPITAL has been publishing from month to month, during the whole period of its three years' existence, articles on industrial welfare, and has been giving a good deal of space

and much thought to this important subject. During the past year, however, this vast field of health service has been in process of crystallization along some definite and pretty well-defined lines.

This number of THE MODERN HOSPITAL speaks for itself, and for the appreciation of industrial employers all over the country, concerning the importance of welfare as a material part of their factory products. No artificial inducement, and no special pleading by publication, could have collected the vast amount of valuable material that THE MODERN HOSPITAL is publishing in this number and has available for publication in future numbers; only a spontaneous response on the part of industrial employers, expressing a great and vital interest in a topic, could have brought about this result. The time seems opportune, therefore, for THE MODERN HOSPITAL to set apart certain of its pages to be devoted each month to discussions of welfare problems in the industries. A journal ten times the size of this issue of THE MODERN HOSPITAL could not have contained the material in hand, and much of this material is too valuable to be lost. Some of it will, therefore, be published in the special welfare department hereafter. Many others besides those who have already contributed material are deeply concerned about this problem, and stand ready to do their part to crystallize it and to create some standards for the conduct of industrial corporations. We shall, therefore, have available a great wealth of material and the mature deliberations and conclusions of many straight-thinking, far-seeing employers who will express themselves in future numbers.

But we do not propose to limit our study of industrial welfare problems to employers; we propose to go to the thinking men and women among the employed, and obtain first-hand information as to what they think about what is being done and about what should be done in the future. We propose to go to the public, and to have expressions from the serious-minded, thinking people who occupy positions on the side lines, as it were, and who see what is going on from a disinterested viewpoint. So that not far in the future we shall have a many-sided view of this problem of industrial welfare, and without question we shall lead to some satisfactory conclusions and to some standards, methods, and processes. If we shall have shown the undesirability of some features in industrial welfare as it is now conducted, and the desirability of other features that are not now in common practice, so much the better for employers, vast sums of whose money is being expended in this work, and so much the better for employees whose health,

happiness, and even lives are confided to the issue.

For the September and other early issues we have the following articles: Cooperation Between Employer and Employee Insures Advantageous Welfare Work; The Value of Employees' Medical and Social Service Department; Where Welfare of Employees Is Considered of Great Importance; Good Light for the Factory Worker; and accounts of the welfare work of Macy's, New York; Lowe Brothers Company, Dayton; Saxon Mills, Spartanburg; L. S. Donaldson Company, Minneapolis; Gordon & Ferguson, St. Paul; John Wanamaker Store, Philadelphia; National Lamp Works, Cleveland; Commonwealth Steel Company, St. Louis; Bush Terminal Company, New York; H. Black & Co., Cleveland; Eastman Kodak Company, Rochester; Firestone Tire and Rubber Company, Akron; Remington Arms and Ammunition Company, Bridgeport.

Industrial Welfare Work—Boiled Down

Welfare work in the industries might be properly divided into seven parts, as follows:

1. Protective devices in the factory.
2. The industrial dispensary—to dress hurts, to treat ambulatory ailments, and to examine complaints of employees.
3. The examination room—to examine candidates for employment, and to make periodic examination of employees engaged in occupations that give rise to "occupational diseases." Sometimes this and the dispensary are one.
4. The cafeteria or midday lunch room.
5. The social service agency—home observation and visiting nursing.
6. The pension and benefit department.
7. The clubs, athletic and social groupings.

PROTECTIVE DEVICES IN THE FACTORY.—It would be well outside the realm of this special number of THE MODERN HOSPITAL to attempt to take up the problem of protective devices in the factory, although this is without doubt the most important feature of welfare work. But it is also largely compulsory in the industries in this country, because of legislation, such as workmen's compensation, employer's liability laws, etc.; so that it may be left to a future special number of THE MODERN HOSPITAL to discuss industrial protective devices.

THE INDUSTRIAL DISPENSARY.—The dispensary is set down as the second feature of welfare work in industrial plants in that it meets the employee at the very outset and incipency of an ailment or illness likely to interfere with his working capacity. Nearly all industrial corporations have such a dispensary, elaborate if the number of em-

employees is large, so that the work has to be systematized, and simple in form and equipment if the number of employees is small. In the dispensary the trivial hurts received at work have attention. It is a rule in nearly all factories that employees who receive even a scratch are sent to the dispensary for examination and such treatment as may be required. In the dispensary many corporations also give medical attention to those of their employees who are not sick enough to be in bed and are too sick to be at work.

There is a very large and insistent question about the medical care of industrial employees, and many corporations are asking themselves and responsible outsiders whether an industrial corporation should minister to the needs of their employees suffering from medical ailments not contracted in their work. Some employers take the ground that employees are entitled to a choice of their medical attendants, and that it is no part of an employer's duty to interfere with this choice, and no part of the employer's obligation to pay for such outside attendance. These employers also take the ground that they do not wish to interfere in the medical profession or to detract from the earnings of physicians in private practice.

Other employers assume the attitude that most employees are not wise in their choice of a private physician, and hence they do not get the best care in such cases and that their illnesses are likely to be prolonged, and that the corporation must stand the expense of such prolonged illness in the shape of payments of sick benefits. These same employers take the ground that their own physicians, selected by reason of their professional ability as measured by the highest standards in the medical profession, should be able to give a better care to the sick than the average employee would get on the outside, and they argue also that there could be no motive and no temptation on the part of their own corporation physicians to serve any purpose but the very best good of the employee and of his return to the highest working efficiency in the shortest possible time. This question is not yet settled.

THE EXAMINATION ROOM.—The laws of most states provide periodic examination of employees whose occupation, under the statistical data of the Government and other responsible agencies, might give rise to occupational diseases. This examination is imperative, and a place must be had in which to do the work. In some corporations the dispensary examination rooms are employed during off hours to make these periodic examinations.

There is no doubt that in the near future industrial corporations will, as a part of their duty to the public as well as to their own employees, make

periodic examinations of employees to catch incipient diseases such as the heart lesions, the organic kidney diseases, bad eyes and bad teeth. Some of this work has already been done, although the corporations as a great class have not yet undertaken it as a routine part of their welfare service. Dr. S. S. Goldwater, as commissioner of health of New York city, is responsible for having instituted these periodic examinations in a large way, and his leadership has shown that a vast majority of employees need these examinations, and the advice and counsel that would necessarily follow them, in order that the employee might be guided away from beginning disease.

THE CAFETERIA.—A great many corporations make an important feature of their cafeteria or midday lunch for employees. There is no doubt that employees who can have a properly selected, properly prepared, and properly served lunch at the midday hour will keep well more uniformly, will maintain a higher efficiency at work, and will live longer and be happier, because home lunches are not calculated to sustain the average employee in a factory and maintain good digestion and full nutrition. Most corporations are serving these cafeteria lunches at a lower cost than employees would otherwise have available.

Some corporations have gone farther than others and have placed their cafeteria luncheon service on a plane approaching a scientific dietary. Perhaps the most notable example of this is the National Lamp Works, of Cleveland, and its fourteen branches in different cities. Some very carefully studied principles are involved in the luncheon service in this corporation. For instance, in the Cleveland factory a charge of 6 cents is made for a cup of coffee, because the corporation believes that coffee is not a good and nourishing beverage for its employees, at least the young women; but a certified, sweet milk, attractively served, costs only 2 cents, or less than the wholesale price in this same factory, because the employers believe that milk is a better beverage for its young women than anything else; and the same care is exercised in the preparation and service of the rest of the menu.

On this same point one very large corporation, whose work is heavy and whose employees are men, made some very careful statistics not long ago, and found that a very large percentage of its factory accidents occurred between 12:45 and 1:30 in the afternoon. Further inquiry developed the fact that most of the men were sending out of the works for beer as the beverage of preference for their midday meal, and it was suspected that perhaps beer had something to do with the great number of accidents that were occurring.

A rule was then instituted forbidding the opening of the gates at the noon hour, and, instead of the beer, employees were given large portions of sweet milk without cost to them, and this same corporation has reported that its accidents at the hours above named were reduced to a negligible percentage.

There is no doubt that the cafeteria luncheons served by most of the corporations are capable of improvement at the hands of trained and thoughtful dietitians, and that instead of heavy, indigestible and unnutritious articles of food, corporations will serve to their employees a far different dietary for the midday meal.

THE SOCIAL SERVICE AGENCY, HOME OBSERVATION AND VISITING NURSING.—There is a doubt in the minds of a good many corporation directors whether it is the business of a corporation to invade the home of an employee, except for purposes of inspection, when the employee is reported sick and asks for a sick benefit. The best information, however, seems to be that a great amount of good can be accomplished, not only for the employees, but for the corporation itself by that close personal surveillance and supervision that comes of visiting nursing in the homes of the people. Many corporation employees draw wages that do not permit them even luxuries of sanitation and good hygienic surroundings, and there is no doubt that even people who know better grow careless and indifferent to their home surroundings under the pressure of financial stress, and neglect even those precautions that require only technical changes in the manner of living and that do not require the expenditure of money. Visiting nurses are enabled to secure the confidence of the people in the home, and to impress on the mother of the family, for instance, that ventilation and cleanliness cost little or nothing, that flies in the summer are unnecessary, and the huddling together at night of large numbers of people, especially children, is hurtful. The older children in a family may be working for the corporation, and may be sleeping in a room illy ventilated that is occupied by several other children. The working young person under such circumstances is rendered inefficient and unfit, and the corporation can serve its own purposes by looking after such details. Oftentimes illness is caused in a working member of a family by poor or badly cooked food and by unsanitary surroundings, and reports sick for the purpose of the sick benefit and to retain his or her place. A visiting nurse can often in such a case inspire the removal of the cause of the trouble. These same visiting nurses can also inspect for sick benefit purposes, and thus reduce the expense of that department in so far as the

expenditure only concerns the altruism of the corporation.

THE PENSION DEPARTMENT.—There is almost nothing to be said just at this place about the pension regulations of American corporations. This feature is being extremely well cared for, and corporations, as a rule, are providing abundant funds out of their own resources or are making up a very large proportion of such funds, employees being assessed comparatively insignificant amounts as their share. In another place the details of the pension arrangement of the Western Electric Company, a corporation employing 15,000 people, are given. In that corporation there is a million-dollar fund appropriated by the corporation itself as a nucleus, and the corporation adds to this fund as occasion may require. For instance, following the great Eastland disaster in the Chicago river a year ago, the company paid more than \$100,000 in death benefits and undertook pensions to even a larger amount.

Sick benefit funds are usually participated in by the employees themselves, and there seems to be a consensus of opinion that such funds should be administered jointly by the corporation and by trustees selected from the employees, the latter usually preponderating in numbers in such boards. But it seems to be a curious thing that, where the corporation is the dominating spirit in the control of sick benefits and even pension funds, there is a more liberal interpretation of the needs of employees than where the employees themselves, through their chosen trustees, dominate such funds. This number of THE MODERN HOSPITAL is so full of first-hand experiences, as told in the various papers, concerning the handling of pension and sick benefit funds, that there seems little more to be said about it.

THE CLUBS, ATHLETIC AND SOCIAL GROUPINGS.—There is a very widespread doubt in the minds of employers whether the social affairs of corporation employees are either a paying investment for the corporation or are appreciated by the employees. It seems to be almost the unanimous opinion that the usual annual picnic of the employees is a good thing, and that it has a wholesome influence in bringing employees together at very rare intervals and under circumstances that minimize the factory atmosphere; but there are other employers who think that their employees' leisure time should be at their own disposition and that they should be removed as far from the factory atmosphere as possible. One head of a large corporation, commenting on this point to the writer of this epitome, suggested that he himself liked to get away from his associates in the business—that he preferred his friendships away from

the business atmosphere; and this same employer told of a unique experience that he had had that emphasized in his mind the difficulties and the undesirability of social agencies in the plant. At the suggestion of the welfare worker of the corporation he had consented to the creation of a musical organization on one occasion, composed of some fifty employees; these employees were given many extra hours off duty for rehearsals and preparations. He told of the culmination of all these plans in quite a grand musical festival held in one of the large theaters of the city over a period of three or four nights. At the end of the festivities the fifty employees who had been favored with off time and other luxuries demanded a continuance of these short hours and absences from work, and that eventually nearly all of them were dismissed from the service because they had been "spoiled" and had ceased to be desirable workers. He told, moreover, of the discontent that had permeated the ranks of the other employees because a favored few had had short hours and absences from work while they, the rank and file, had no such favors—and there was disorganization everywhere.

Another corporation head spoke of the bowling leagues and baseball nines. The corporation had hung up trophies for these various athletic sports; the men playing on the various teams were given off hours and all sorts of luxuries in the shape of luncheons, extra bath facilities, athletic rooms, and the like; and it was his experience that out of a corps of 5,000 employees less than 100 were interested enough in the various sports to attend the league games; so that all the expense and organization concerned in these sports were taken advantage of by only a small fraction of the total number of people employed.

Another employer told of a hundred-thousand-dollar club room, the gift of the widow of the originator of the business, of the splendid equipment in the rooms, of the recreation facilities provided there, and he said that less than 1 percent of the corporation's employees made use of those splendid quarters, and these were foremen who went to the reading rooms to consult periodicals, and sometimes officers who went there to play games; but that the rank and file of the employees never went there.

There are doubtless other and contrary experiences, but the men who gave these experiences had all risen from the ranks and were deeply concerned for the welfare of their fellow-workmen and workwomen.

An Apology

We hope that the regular readers of THE MODERN HOSPITAL, and the hospital people generally, will find in this Special Industrial Welfare number food for thought and much information of value, but it is to be regretted that the importance of the subject and the enthusiastic reception of the proposal to create such a special industrial welfare number by those in the industries has made it necessary to withhold very much of our regular contents. Next month we shall try to make amends.

Indian "Caste" in British Hospitals

Soldiers from the East Indies, fighting for Great Britain against the Germans, are a great problem in English hospitals when they are sent across the channel wounded. The "caste" question causes the trouble, and even an English medical officer who has been stationed in India for years seems unable to fathom the mysteries of Indian "caste." A correspondent of the *Medical World* writes as follows in regard to this subject:

Major S. James, chief of the hospital, which is equipped for 2,000 patients, and is conducted by officers of the Indian medical service, described the provision made for enabling Indians to live in accordance with the customs of their own country, and pointed out various conditions which must be strictly observed to prevent patients losing caste. They have to serve eight separate diets, cooked in twenty-one cookhouses in the hospital grounds, for the patients. For the staff sixteen other cookhouses are in use in the village. The Hindu cooks have to be of the same caste as the patients they cook for, or else higher. No beef is allowed inside the hospital, as the cow is a sacred animal to Hindus. Bacon and pork are also prohibited. As Indians must themselves slaughter the sheep they use for food, and in their special manner, a slaughter house has been provided for them. Hindu sweep off the head of the animal with a single stroke of a talwar or sword. For Mohammedans the mouth of the animal must be pointed toward Mecca.

The hospital requires sixty or seventy gallons of water per man a day—not so much when it is remembered that an Indian must bathe before prayer, and that a good Mohammedan must pray five times a day. The flooding of the bath rooms is a common trouble, as the patients neglect to turn off the water. Before the electric light was in use they persisted in blowing out the gas, so there was always danger of poisoning. As Hindus who die must be cremated by members of their own caste, a site has been set apart for this, and the funeral ceremonies can be carried out as precisely as in India.

Mr. Clement (deputy surveyor) estimated the consumption of water at the Kitchener Hospital as over 100 gallons a day. He added that one amiable failing of the Indian was to turn on the hot water and wait until it cooled to a comfortable temperature for bathing.

Prescott, in his "Conquest of Mexico," states that hospitals were established by the Aztecs in their principal cities for the care of the sick and the permanent refuge of disabled soldiers, and surgeons were placed over them, who, in the words of a cynical chronicler, were so far better than those in Europe that they did not protract the cure in order to increase the pay.—Richard Dalton.

The success of a movement for the establishment of a Catholic hospital at Gallup, N. M., appears to be secured, and it is expected that the erection of a \$50,000 building will be started soon. The institution will be conducted by the Sisters of St. Francis of Lafayette, Ind.

WELFARE WORK—STORIES FROM THE VARIOUS INDUSTRIES

An Attempt Is Made in These Pages to Epitomize and to Present Only the High Lights of Health and Betterment Service in a Few Prominent Plants in a Number of Branches of Industry

Chicago Telephone Company, Chicago, Ill.

BY JAMES PRENTISS DUNCAN, Chicago, Ill

If the popular conception of the soulless corporation were true of the Chicago Telephone Company, the company would get its employees in any available way, assign their duties, see that they were performed, pay them what it was compelled to, and have no further interest in the individuals comprising its force. The popular conception is wrong. The company wants to make money and to pay a legitimate return on the capital reasonably invested in it, for only by doing this can it justify existence. Experience has taught that the easiest way to accomplish this permanently is to get the best

as ideal as possible. This is the policy of the company, for betterment work results in more satisfied employees and consequently better telephone service, the ultimate aim.

As a part of the American Telephone and Telegraph Company, the employees of the Chicago Telephone Company are included in the pension and disability benefit funds, which are probably the most comprehensive schemes for the benefit of employees that have ever been established by a corporation. They are without expense to the employee, and, except in case of accidental injuries, are limited to those of over two years' service with the company. The pension scheme provides for the



Fig. 1. Chicago Telephone Company. Entertainment at Congress Hotel. Operators seeing moving pictures of "The Modern Seven League Boots."

employees, treat them in the best possible way, and do as much as possible for the employees, for without the loyalty and devotion of every employee the company is in peril. To secure this loyalty, on every possible occasion attempts to help its employees are made by the company.

The Chicago Telephone Company has been a pioneer in much of its "betterment" work—that is, in the things done for the employees for their betterment, beyond the doings of a typical soulless corporation. It has made and will continue to make every reasonable effort to be fair and just to its employees and to make working conditions

retirement on a pension of employees of certain ages and after completing certain terms of employment. The amount of the yearly pension is 1 percent of the annual average pay for ten years multiplied by the number of years in the employee's term of employment. The minimum, ordinarily, is \$20 per month. Benefits are paid to employees accidentally injured in the course of their work, regardless of the length of service. Benefits are paid to employees unable to work on account of sickness, the amount varying with the term of employment. Death benefits are paid to the employee's survivor where the death is caused by sickness after five years of service.

Death benefits for accidental deaths are paid regardless of the term of employment.

This fund is under the direction of the Department of Relief and Safety. This same department includes the Bureau of Employment, the Health Department, and the "Safety Work" of the Company, thus combining under one control the records of the employee from his beginning with the company. The Health Department exam-



Fig. 2. Chicago Telephone Company. Operating room at Harrison office. Note arrangements for light and ventilation, rubber matting on floor, foot rests, and backs on chairs.

ines new employees before they are permanently located, exercises general supervision of employees who are drawing benefits by reason of sickness or accident, provides free counsel and advice to any employee who wishes to consult a physician for himself or family, and takes care of accident cases. The purpose of this department is to prevent the employment of persons who may transmit disease to fellow-employees, or who are not physically able to perform the duties required of them. After employment every effort is made to advise the employee how to keep in good condition and what to do in case of illness. To this end demonstrative lectures are given on first aid to the sick and injured. Medicine cabinets, etc., are maintained at exchanges, and there are first aid kits supplied to all line gangs, with complete instructions for their use; visiting nurses are employed to visit employees, and reexaminations of employees are made. The staff of this department consists of six doctors (one of whom is a woman) and three nurses. The work of this department has been very successful, and its results are apparent in the improved health of all the employees.

Another general scheme in which the employee of the Chicago Telephone Company participates as a part of the American Telephone and Telegraph Company is the stock purchase plan. From time to time employees are permitted to purchase, very advantageously, stock of the parent company, payable in monthly installments, with accruing dividends credited to account and interest at 4 percent charged on the unpaid balance. The employees have voluntarily subscribed to this to a considerable extent.

A loan fund has been created by the Chicago Telephone Company to assist its employees in times of misfortune. No interest is charged. A relief fund has also been established, from which assistance can be given the

employee when the circumstances of his case make it impossible or undesirable to apply to the loan fund.

For several years a magazine, the *Bell Telephone News*, has been distributed free to all employees. It is a thirty-two page illustrated monthly, well edited, and covers the happenings of the month in the business, and furnishes news regarding personal happenings to the employees.

Almost 50 percent of the employees of a telephone company are operators—young women. Since their employment the policy of the company has been to treat them with the utmost consideration, for the public meets the company through the operator, and derives its impression of the whole system from this part. A contented and happy operator makes the best impression. To secure this sort of operator has been the endeavor of our engineers; ventilation, heat, the most comfortable chair, the height of foot rests, the size of the switchboard, have all been objects of special study to adapt them to the comfort of the operator while working.

The operators pass a physical examination before employment. Lectures and exercises on the use of the voice, calisthenics, general hygiene, etc., are given in the school where they are taught their work; all the steps necessary to get and keep a fine, healthy force have been made. Toilet, sanitary, and other comfort arrangements are as perfect as possible. Where space permits, pianos, victrolas, gardens, etc., are provided. Always there are rest rooms to which the operator may retire. Libraries, individual towels and telephone sets, lockers for street clothes, and many other devices are used to keep the operator as comfortable as possible. This is carried to the length of providing dry stockings and shoes for her



Fig. 3. Chicago Telephone Company. Lunch room at Oakland office.

wear during wet weather while her own are drying. Her health is of the utmost importance, and the attempt is made to preserve it in good condition, preferably to curing after it is affected. The length of continuous service is strictly regulated, the working day of eight hours being broken by a fifteen-minute rest, a half-hour lunch period, and another fifteen-minute rest at intervals of two hours. A nutritious luncheon is served in cafeteria style free, and the amount of food is not limited. As the work of telephoning is continuous, many problems arise which the company has solved with rare forethought—luncheon at night, breakfast before leaving in the morning, two hours sleeping period, all assist in preserving the operator's health.

Every effort is made to win back their health if it is affected during employment. In conjunction with the Chicago Tuberculosis Institute, in 1913 a 6-bed shack was built at Naperville under Dr. Sachs' supervision. Every precaution is taken to discover any incipient cases of tuberculosis. Fortunately, few have been found, but those few who have been sent to Naperville have justified the expense of building the shack. Invariably the disease



Fig. 4. Chicago Telephone Company. Rest room at Edgewater office.

has been arrested, if taken in time, and the girls have returned cured. In the search for health, girls have also been sent as far as Colorado, Canada, and New York.

There is being built at Warrenville a recreation home for the girls, provided with all comforts. This work is the result of experiments made in preceding years at Highland Park and Lake Bluff, in which places many of our operators who needed country air, good food, and surroundings were satisfied, and returned happy and healthy after a delightful vacation.

There are many other ways in which the company expresses its friendship for the girls besides sharing in the general features outlined above. The chief operators are chosen not only for telephone efficiency, but for friendly

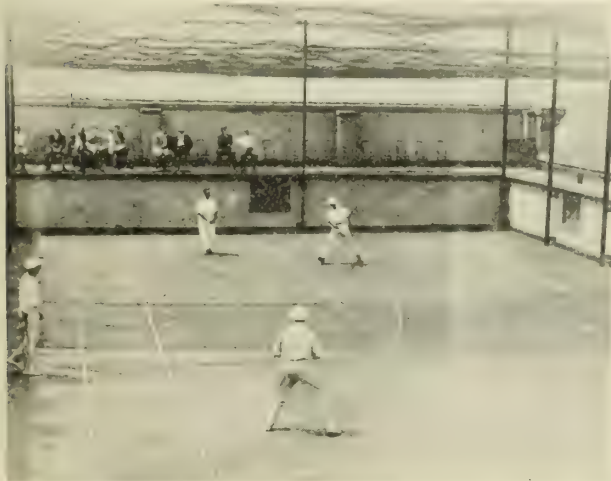


Fig. 5. Chicago Telephone Company. Tennis court on roof of main office.

interest in the force; matrons are in the exchanges, who help "mother" the girls, and the welfare department, through nurses, goes to their homes, and advises and assists those who are sick or in trouble. Social affairs are encouraged. The entertainment pictured, showing a film

made by the company with employees only, was given seven times to accommodate all. Dancing and a banquet accompanied the pictures. Smaller gatherings are frequent, and provide much pleasant amusement.

Every precaution is taken to guard the operators, to select bright, competent, attractive girls, earnest above the average business girl, and to make telephone operating the most desirable profession for a young woman. Permanency of position, opportunity for advancement, and the most congenial of surroundings are offered to retain them. This results in unusual efficiency, but carries a penalty of its own. Our statistics prove that the vast majority of resignations are for the purpose of being married. It is not because they are telephone girls that they marry so readily, but because telephone girls are recruited from the class of girls that are of the most marriageable sort, and their employment has not injured them, but, on the contrary, assisted in their improvement.

The betterment work for the other employees, except the operators, is in charge of the heads of the various departments and, in a general way, under the supervision of a central committee. As the great majority of these

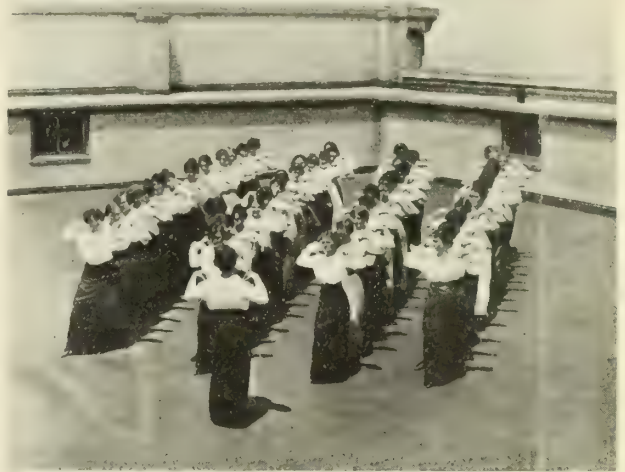


Fig. 6. Chicago Telephone Company. Calisthenics on roof of main office.

are men, the betterment work, beyond the general features first outlined, takes the form of recreational and athletic features. In many cases the company furnishes the equipment or the place for these various recreations. For example, there were last year twenty-six uniformed baseball teams playing Saturday afternoons. Eight additional teams were made into a junior league for boys under 19. Prizes were offered to winning teams by the company. Equipment was provided, and in the past a ball park has been leased for these teams, but the many parks of Chicago well equipped for such sports have made this unnecessary. Basket ball, indoor baseball, bowling, chess and checker, camera, rod and gun, sewing, tennis, track and field, players', golf, indoor golf, and gardeners' clubs are organized. There is also a Monday luncheon club attended by from 150 to 250 men, where a speaker or other entertainment is provided, only the cost of the food being paid by the members. A woman's lunch club of similar plan is just organizing. The glee club is very successful under the leadership of one of the best choral masters in the west. The band and orchestra, each composed of over fifty members, do very creditable work for amateurs, and have frequently provided music for the entertainment of the other employees as well as

of themselves. These recreations for the men in the offices are often the only physical exercises regularly taken, and for the outside men they are pleasing variations. They are encouraged and enjoyed by all.

The accident prevention or safety work of the company for men has taken the form of articles printed in the *Bell Telephone News*, safety bulletins, and pay check inclosures. Recently this department has begun giving illustrated safety first lectures. There has been a gratifying decrease in the number of accidents, and considerable interest aroused among the employees by this work.

In an educational way there are two schools for men conducted by the company. The plant school was organized in 1906, and has been attended by over 5,000 men. Practically every man in the department has received instruction in this school, to which they are assigned from time to time as new equipment is introduced and to make them more perfect in their usual work. The intent



Fig. 7. Chicago Telephone Company. New recreation camp at Warrenville, with some of the possible recreations.

is to increase the employee's general knowledge of telephony and make him more perfect in his work. Besides the school room instruction, correspondence courses, display panels, booklets, question boxes, and general lectures are used. In 1913 evening classes in telephony were given in the Chicago High School. The efficiency of the employees has been much increased by this school.

The office boys' school has been only recently started. Most of the boys are compelled to work, and are insufficiently prepared to enter business life; after a few years they are too old for office boys and not ready for other work; so through the Y. M. C. A. a course in penmanship and other elementary and advanced courses are given free of charge. It is hoped that through these courses the boys may be able to continue with the company in other positions after their period of usefulness as office boys has expired.

By its general features of betterment work the company intends to provide some insurance, financial assistance, and "savings" aids for the employee, to get the best employees, and to keep them in health and contented. By the special features for operators and for men it endeavor

ors to assist the employees in those things where experience has shown assistance is desirable. This is far from the policy of the typical soulless corporation. It shows on the part of the company a genuine interest in bettering the employee, and results in the employee being a loyal, devoted, and efficient part of the Chicago Telephone Company.

Interborough Rapid Transit Company, New York

BY H. H. VREELAND

Briefly, the purpose sought in the creation of a welfare department by this company was to provide a "central clearing house," as it were, for collecting and considering the views and ideas of employees and officials alike looking toward more scientific development in plan and scope, and more intelligently directing to the best advantage in economy and effectiveness the various phases of so-called welfare work which had evolved through the voluntary cooperation of employees and officials in doing those things which, socially and economically, made for their mutual betterment.

The affairs of the welfare department are conducted under the direction of a welfare committee, which is presided over by a director of welfare work. This committee, of which the director of welfare work is chairman, embraces all the staff officers. As chairman of the welfare committee, the director of welfare work ranks as a staff officer, reporting direct to the president on all matters pertaining to the activities of the welfare department.

PLAN AND SCOPE.—The affairs of the welfare department are conducted along these lines:

The director of welfare work, working hand in hand with the various "line" officers, makes a thorough study of all the conditions of employment in the various departments, frequently holding meetings of the men for full discussion of matters which, from their viewpoint, may be susceptible of improvement. Such things as these investigations develop which, in the opinion of the director of welfare work, involve neither a matter of policy nor the expenditure of a large amount of money, are immediately put into effect, while those improvements which do involve a matter of policy or the expenditure of money are referred to the welfare committee. The welfare committee, consisting of the various staff officers, meets once a month, and is subject to special call of the chairman, the director of welfare work. At these meetings all matters of importance affecting the general interest of the relation of employees to the management are freely discussed, and ways and means determined on for doing those things which, to the minds of all concerned, seem necessary to improve the general condition of employment, as well as the social conditions of the employees.

WHAT THE COMPANY IS DOING

VOLUNTARY RELIEF.—Some years ago the company adopted a plan of mutual voluntary relief, through which all might become associated for the purpose of securing specific relief for themselves and families in case of sickness, accident, and death. In the formation of this voluntary relief association the company supplied all necessary facilities for carrying on the work, furnishes the necessary administrative force without expense to the association, and guarantees the fulfillment of all obligations assumed by the association.

The voluntary fund provides for the payment of benefits to the sick or injured members, and for the payment of death benefits ranging from \$250 to \$2,000, depending on the class of insurance held. Any member who has been

continuously in the employ for a period of five years immediately preceding the termination of his employment by the company, and who has been a member of the relief fund for such time, may, with the approval of the advisory committee, on such termination of employment, continue to be a member of said fund, but only with the privilege and for the purpose of contributing, according to the regulations, to the minimum death benefit contributed for by him for the entire last five years of such employment, or to any smaller amount, provided that a supplementary application therefor, in the prescribed form, shall be made by him before such termination of his employment or within ten days thereafter. The fund for the payment of these benefits is created by contributions from employee members, and, under the regulations and provisions, there can be no payments out of the fund except for benefits. The surplus funds not required for current use have been invested in such securities as are legal investments for savings banks in the state of New York.

Provision is also made under the regulations that, in cases of extreme necessity, a substantial portion of the death benefit may be paid without formality; thus, in many instances distress has been averted or immediately relieved, and everything possible done by the department itself to save trouble and expense to the members and their families. This has resulted in many expressions of goodwill toward the association.

The affairs of the association are controlled by an advisory committee. The members of this committee are chosen equally by the employees who are members of the fund, and the board of directors, the president of the company acting as ex-officio. The committee holds stated meetings, at which all matters pertaining to the fund are fully discussed, with free expression of opinion by employees. The members selected by the employees are in constant close touch with their fellow-members, reporting to the relief association all matters requiring attention which come to their notice.

It is wholly optional with the employees as to their becoming members of the voluntary relief association, and officers of the company make no effort to induce employees to become members of this association. At present this association comprises approximately 60 percent of all the employees of the system.

PENSIONS.—The benefits of the pension system apply to the following cases:

Employees who have attained the age of 70 years, provided they shall have been in the service of the company or its predecessors not less than twenty-five years; and employees who shall have been twenty-five or more years in such service, and who shall, in the opinion of the board of pensions, have become physically and permanently disabled.

The acceptance of a pension allowance does not debar any employee from engaging in other business. The rate of pension is governed by the length of period of continuous employment prior to retirement, and runs as high as 40 percent of the annual average wages for the ten years previous to retirement.

LOAN FUND.—A loan fund has been established for the purpose of aiding employees who, by reason of sickness or death in their families, may be in need, thereby rendering it unnecessary for them to apply to outside sources for temporary financial aid. Under the provisions of the loan fund any employee, after having been three months in the service, may secure a loan without collateral of any nature up to an amount equal to twice his weekly wages. Money loaned on this basis is returned to the general fund

through a deduction from the pay-roll of 10 percent of the total loan each week, these deductions starting two weeks from time loan is made. If, for any reason, an employee finds himself embarrassed in meeting these weekly payments of 10 percent, there are several conditions under which the time is extended, the length of which depending on the merit of the individual case.

HOSPITAL CARE AND MEDICAL ATTENTION.—Members of the relief association, as well as employees generally, are entitled to the services of two regularly appointed physicians of the company, who maintain an office at No. 165 Broadway for the purpose of directing and supervising the care and treatment of the sick and injured. These physicians, however, do not actually treat the sick or injured at their homes, to the exclusion of a family or other visiting physician, but make necessary calls at the homes of employees or at hospitals for the purpose of ascertaining the nature or extent of the injuries or illness, and the probable period of disability. Employees are also privileged to come to the office of these physicians, without cost to them, for treatment of various medical and surgical ailments; also for examination and advice regarding ailments not necessarily serious, but which, unless treated and checked, may subsequently develop into disabilities.

Employees requiring surgical operations are taken to the Post-Graduate Hospital in New York city and placed in care of the chief surgeon of the company, who personally treats such cases and performs needed operations, or gives needed preliminary and subsequent treatment at the hospital dispensary. Cases not strictly surgical—notably diseases of the eye, ear, nose, and throat—are also sent to the hospital dispensary, and, according to the nature of each case, referred to various specialists. This opportunity for medical and surgical treatment is largely taken, and many operations for hernia, appendicitis, tumors, and various other ailments have been performed without cost to the employees. Through contributions made by the company, employees are also able to secure for themselves and members of their families free medical and surgical treatment at various other hospitals in the city.

SUNSHINE COMMITTEE.—This committee consists of an employee selected from each department of the company's service, with several officials of the company acting as ex-officio members. The duty of each member of this committee is to keep in close touch with his fellow-workers in the department in which he is employed, reporting to the committee all those who have met with misfortune and may be in need of assistance. Through this general scheme of organization, calling for a representative of each department of the service, there is small chance of overlooking or neglecting anyone requiring assistance.

The duty of the committee is to visit the sick and the homes of the dead, and, wherever possible, alleviate suffering and assuage the grief of relatives of those who have met with misfortune. This committee has a volunteer doctor and a committee of ladies—wives of employees—who visit the homes of those in need, and administer to their comfort during the period of distress. This committee has gone so far as to move and ship furniture, pay railroad fare, and each year makes it a practice to prepare and send Thanksgiving and Christmas dinners to families of employees in need of succor. The money to carry on the work of this committee is raised through picnics and outings and from contributions made by the company.

VISITING NURSES.—The scope of the duties of the visiting nurses is quite varied, and would require a volume were we to undertake to do the subject justice in explain-

ing in detail the various activities of this feature of the work, but, in a general way, it may be said to comprehend three principal divisions—namely, (1) employees, (2) their wives and families, (3) general duties, a few instances of which are indicated below.

Immediately on notification of a man's illness the visiting nurse calls on him, and, if it is evident to her that a doctor's attention is needed, a physician is called in at once. Where proper care of a sick employee is obviously impossible in his own home, arrangements are made for him at a hospital, and, if an operation is advisable, the company is at once notified and makes the necessary arrangements for his proper care. Many serious cases which have come to the attention of the visiting nurses have been handled most effectively and satisfactorily through this arrangement.

When a man is convalescing from an illness or operation, and the home accommodations or environment is not such as to prove conducive to a prompt and permanent recuperation, arrangements are made for him to go to either the Burke Foundation in White Plains, or some other institution of this sort for a period of two weeks or longer at no expense to the invalid. During the absence of the man from his home, or during the period he is at a convalescence home, it is part of the duties of the visiting nurses to see that his family is properly taken care of. If it is found that the family becomes temporarily embarrassed financially, arrangements are made for the payment of the rent and household necessities through the sunshine fund. During this period of convalescence it is also the duty of the visiting nurses to keep close watch over the general health and condition of the wife and children. If it is found that, because of worry, the wife is gradually losing control of her own physical well-being, arrangements are made for her proper care, or, if the children are in need of shoes, stockings, or anything of that sort, arrangements are made for their provision.

In case of the death of an employee leaving a widow and several children, and the woman desires to keep her home, the visiting nurse either tries to secure boarders for her and work of such character as may be done in the home, or, if the children have reached an age which will permit of her leaving the home, outside employment is found, and in this case the visiting nurse exercises general supervision over the home, looking out for the welfare of the children while the mother is away. The duties of the visiting nurses also involve explaining the proper preparation of all food and advice in the matter of economical purchasing; instruct and direct in the care and feeding of infants; discourage anything and everything that does not tend to produce good morals, and teach the value and necessity of cleanliness and the benefits of fresh air and sunshine.

In this, as in all other of the activities of the welfare department, the home of the pensioner is not overlooked or neglected, and the visiting nurse makes it a practice to call, at as frequent intervals as possible, at the homes of employees who have been retired from the service of the company with a view to looking after their general welfare and providing those things which may make for their greater comfort.

EMPLOYEES' STORES—BAKERY.—In an effort to reduce the high cost of living, the company, with the approval and cooperation of its employees, has established stores throughout the city of New York, upon the company's property, in which the employees are able to obtain all the necessities of life in the way of foodstuffs at actual cost to the company. In these stores only the purest qual-

ity of food is sold on the theory that it is quite as essential that the men obtain wholesome, pure food as that they obtain food at reasonable cost. These stores have been equipped throughout with fixtures of the most modern type, including freezing plants and general fixtures, insuring the highest possible degree of sanitation. Every store is directly in charge of a man who has had years of experience and training in this line of work. The stores are liberally patronized by employees, and it is possible to secure in them a much better quality of food at a cost considerably less than the prevailing price of foodstuffs.

RESTAURANTS.—At practically all terminal points throughout the city of New York, restaurants are maintained for the benefit of employees. These restaurants are kept open throughout the twenty-four hours, where cooked food is sold at actual cost. Many of the employees, more especially those not married, avail themselves of these facilities throughout the entire twenty-four-hour period, where a full meal can be had at nominal cost. In these restaurants upward of 1,000,000 meals are served annually to employees.

RECREATION ROOMS.—At practically all terminal points the company maintains recreation rooms for the use of employees. These rooms are equipped with libraries, reading rooms, pool rooms, shower baths, and other comforts of club life. The books for the libraries in these recreation rooms are furnished by the New York City Traveling Library, thus insuring to the employees the best and latest in literature. The books are also available to members of the families of employees for a limited period without cost, the general scheme of the circulating feature of the library being conducted on practically the same basis as the public libraries. To stimulate interest, the company encourages during the winter months pool, billiard, chess, checker, and domino tournaments. At our Two Hundred and Forty-sixth street recreation room a concert or assembly hall has been built, seating 300 persons. Throughout the year various kinds of entertainments are given here—stereopticon exhibits, amateur operas, band concerts, lectures, etc.

NOON-DAY SHOP MEETINGS.—In cooperation with the company officials, since the spring of 1906 the West Side Young Men's Christian Association has been developing what is known as "noon-day meetings," held in shops and recreation rooms of the Interborough. The purpose of these meetings is to bring to the men in the short noon-hour period recreation, education, and inspiration. In order to accomplish this threefold purpose, excellent musicians, vocal and instrumental, are engaged to give a first-class musical program of three or four short numbers. Between the musical numbers a speaker addresses the men and in clear, concise phrases presents a life message. If he is a doctor, the message may be in the line of instruction of ways in which to avoid disease or to increase physical efficiency. If he is a minister, the message may be to inspire the men to a cleaner moral life and to a keener sense of responsibility for their fellows.

Narrow sectarian or denominational discussions are avoided, and the great universal principles of righteousness and justice are emphasized. Many an effective appeal to the higher senses of the man is made through the simple telling of a story. Birthdays of men prominent in the history of our country are marked by presentations of the lives and characters of these men. A considerable number of business men and lawyers help in the speaking at these noon meetings. One man, a wholesale grocer, comes one noon each week from Jersey in order to give one group of shopmen his conception of true living. The sub-

ject of safety has been presented at the various meetings by a representative of the American Museum of Safety. Plain talks on personal efficiency have been given by a representative of the Y. M. C. A. efficiency course.

No door of opportunity has been left unopened through which it has been possible to bring to the employee of the Interborough the practical advantages which the Young Men's Christian Association affords. Each year an open invitation is given for any man having a personal problem which he would like to talk over with an older business or professional man to come to the Y. M. C. A. for this interview. Cards are printed explaining this opportunity, and any man can make an appointment by simply signing his name and address and sending his card to the association office. In this way many men have been helped in practical ways, men whom without the private interview plan it would have been impossible to help. Each year a large entertainment has been held at the Y. M. C. A. building, to which all those interested in the shop meetings have been invited to bring their families. The program at these annual entertainments has been furnished partly by the Young Men's Christian Association and partly by the men of the various shops. The subway band held a leading place on the program of one recent entertainment.

The meeting in each shop and recreation room is in active charge of a committee composed of Interborough employees, who are interested in its success. These committees advise with the Y. M. C. A. director regarding music requested and subjects for speeches. Twice each year these committees meet with the director at the West Side Y. M. C. A. in order to discuss plans for the improvement of the meetings. For the building of character and men, these noon meetings are expressly designed.

SUBWAY BAND.—The company has a band of 100 employees known as the subway band, properly uniformed and equipped, which plays at various special and other functions of the employees, and has grown into one of the best musical organizations of the city of New York. While its uses are generally restricted to company affairs, it occasionally participates in patriotic and civic functions, frequently furnishing the musical service at Sunday night church concerts, on which occasions employees generally attend, and for the last three years has acted as escort to the Grand Army to and from their annual church service. The general object sought in the formation of the band was to place at the disposal of such of our employees as are musically inclined means for further study and practice of music, as well as to inspire loyalty and patriotism. Every man connected with the band is taught discipline, and every member is on his honor to carry this discipline study into his every-day life and work, to be courteous to passengers, and to preach the subject of good service to the traveling public and to every other subway employee for whose general benefit the band was created. The company has provided the band with meeting and rehearsal rooms, and, as those rooms are located at one of the important terminals of the company, employees are in the habit of gathering there on rehearsal nights to enjoy the music.

ATHLETICS, OUTINGS, AND OTHER SOCIAL AFFAIRS.—The company has devoted some of its real estate holdings to playgrounds for employees for baseball, football, tennis, etc., with a grandstand for the use of themselves and friends. These grounds are always in great demand during the different seasons. The company has been instrumental in forming a baseball league, with clubs representing the various departments of the service, and between

which there is the keenest rivalry. The officials of the company personally contribute each year a league championship baseball pennant, which is awarded the winning club, and gold medals, suitably inscribed, for the individuals of the champion team, giving at the end of the season a dinner to members of the entire league.

During the different seasons officials of the company encourage employees to arrange picnics, balls, clam bakes, minstrel shows, and other functions of a social nature. During the winter months each department holds its annual ball, as well as its annual dinner, in which affairs all officers of the company participate financially and socially. During the summer months various departments give outings and clam bakes, usually chartering the subway band and a boat for a sail to some of the various nearby picnic resorts.

The object of these social gatherings is to cultivate a closer social relationship and a greater feeling of community of interest between the employees themselves, as well as between officials and employees, to the end that all may become impressed with the idea that officials and employees have but one interest at stake, and both are striving for one common purpose—namely, the general welfare of all.

INTERBOROUGH BULLETIN.—The company publishes monthly and circulates among its employees an illustrated newspaper containing articles of personal and educational interest, and its columns are at all times open to the expressions of employees. In addition to articles of a technical nature relating to traction operation, and articles of a personal nature relating to employees and their families, the paper is also used as a medium for keeping employees informed on rules and regulations of the company and its general operating policy.

FREE TRANSPORTATION.—Effective December 1, 1913, the company presented to the wife of every employee who had been in the service one month or more a pass good for free transportation over the system in which the husband is employed.

SUMMER UNIFORMS.—The company has adopted the policy of furnishing free to all employees of the transportation department of the subway white duck uniforms, which are laundered and maintained without cost to the employees, thereby promoting the comfort of those whose employment keeps them on the underground system during the summer months.

CHRISTMAS REMEMBRANCES.—In recognition of the co-operation of employees, the directors of the company the past two years set aside a sum of money from which each employee receiving \$115 per month or less, and who has been in the service for one year or more, shall receive a Christmas present of \$5 in gold.

Prudential Life Insurance Company

BY CHARLES W. CRANKSHAW, M. D.,

Physician in charge of infirmary, Prudential Insurance Company, Newark, N. J.

The practice of hygiene and sanitation in business has increased considerably during the past few years, and the solution of hygiene problems in the laboratory has contributed in no little way to the means now used for the protection of those employed in or about the shop, factory, or office of great or small industrial establishments.

The social service worker is helping to solve some of these problems, and greater service can be rendered if a visiting nurse is employed to visit employees at their homes or in the hospital when they are sick or injured. The social service department of the Massachusetts Gen-

eral Hospital serves as a striking example of what we mean by real social service work, and is rendering excellent service, counting mightily for efficiency. In this way prevention and not cure plays the title role.

Preventive medicine is of great value commercially, and this is true conservation of time, money, and physical and mental energy. In industry all education must be turned to practical account. Many of the large and small industrial establishments look after the health and welfare of their employees. As to hygiene provisions of a great life insurance company like the Prudential, where about 4,000 employees at the home office are busily engaged in the conduct of the business, it is quite essential, in order to get the highest efficiency, that everything possible be done to safeguard the health and conserve the lives of those employed in the four large buildings, comprising the group known as the Prudential home office.

The greatest attention, then, should be given to the care and welfare of the most wonderful mechanism ever created—the human body. Some of us try to exercise great care as to the hygiene of our bodies, while others, who think they know better, persist in doing things to the detriment of the mechanism, and it is little wonder that their physical and mental powers become impaired and inefficient long before they should. Nature is patient and long suffering, but she requires a final adjustment of her account.

To begin with, all applicants for clerical positions with the Prudential are required to take mental tests and are subjected to a medical examination. Applicants for positions in the printing and bindery departments, culinary department, engine room, electricians, machinists, elevator men, porters, etc., are required to pass a medical examination before entering the service. In the culinary department, in addition to the examination on entering the service, an examination is made every three months of all those handling the food, dishes, or linen. This includes everybody from the steward and chef to the dishwashers. We pay special attention to diseases of the lungs, heart, throat, skin, etc.

We will refer to the problems of hygiene, safety, and welfare of the employees, worked out and put in operation by the Prudential at the home office, under the following headings:

Ventilation.	Safeguarding machinery.
Lighting.	First aid hospital or infirmary work.
Heating.	Graduate nurses for the infirmary and visiting service.
Drinking water.	Cases referred to rest and recreation room for egg and milk.
Dust removal.	Disability, service retirement, and sanatorium allowances.
Flies, etc.	Office hours, vacation, and special days.
Rubbish disposal.	Rest and recreation.
Washing facilities and toilet arrangements.	Concerts, etc.
Soap.	Field and athletic games.
Towels.	
Lockers.	
Drying room for clothing.	
Umbrellas supplied.	
Telephone exchange.	
Culinary department.	
Kitchen.	
Serving room.	
Dishwashing room.	
Dining rooms.	
Garbage.	

VENTILATION.—Great attention is being given to the matter of ventilation, and in some parts of the building

the air is washed and pumped into the rooms; others have a ventilator connected with each window that can be opened and shut at will, and these are connected with the radiator system, so that in winter the air can be warmed as it comes into the room. Electric fans are installed throughout the buildings, and these, in connection with ventilating apparatus installed and the fact that the buildings are well supplied with windows, insure to the employees an abundant supply of fresh air. The air in each department is sure to be swept clean at intervals throughout the day, as it is the duty of several men to continually go about opening and closing the windows of the different departments for an interval of a few minutes. There may be isolated parts of the building where it may be necessary to pump in air, and in one or two such places a ventilating system has been installed at some expense, but, when it comes down strictly to good ventilation, it is my opinion that an abundant supply from the outside can be secured through the opened windows, as the old-fashioned idea of opening the windows cannot be excelled by any system of washed air, and afterwards



Fig. 1. Prudential Life Insurance Company, New York. Reception room of infirmary.

pumping it into certain rooms or departments, unless such rooms are some distance from outside walls. In our machine shop and one or two parts of the building, where it is impossible to have a direct connection with the outside air, machines have been installed to pump in fresh air, thus insuring the workmen an abundant supply. As I said before, the problem of ventilation is continually being studied, and, wherever the system can be improved, this is being done. From our present knowledge we know room temperature should be kept as near 68° as possible and then the air to be kept in motion.

LIGHTING.—The buildings are all well equipped with windows, and there are very few parts of the buildings in which it is necessary for artificial light to be used throughout the day. Proper window shades are hung to each window, so that the light can be properly adjusted to the degree of sunlight outside. In case artificial light has to be used, each desk is properly provided with an electric light, which is held up from an arm which can be swung to the right or left according to the position of the one sitting at the desk. This light can be lowered or raised, as the case may be, and the electric bulb is properly screened with a suitable green shade. In addition, the large blotters which are placed on each desk are of a green color, and these serve to rest the eye to a great ex-

tent. The indirect lighting system is being gradually installed throughout the buildings, and especial attention is given to the lighting of the filing department, vaults, etc.

HEATING.—The buildings throughout are heated with steam, and some of the rooms have automatic adjusters to regulate the temperature.

DRINKING WATER.—One of the most important things for the employer to consider is that of the drinking water supply, and, as we found from the reports received from the city laboratory that it was not safe to use the water from our driven wells for drinking purposes, this supply has not been used except for mechanical and toilet purposes. We use the water which comes from the city mains. This is tested frequently by the city bacteriologist, and, as we are constantly in touch with the board of health chemist or city bacteriologist, we are assured that the water used for drinking is safe. In fact, our bacteria content is lower than the supply direct from the city mains for the reason that we have a filtering plant, and the water passes through the filters and then through a cooling process before it enters the drinking fountains, which are installed throughout the buildings. A recent laboratory report



Fig. 2. Prudential Life Insurance Company, New York. Rest room of infirmary.

showed 25 bacteria per cubic centimeter before filtering and 10 bacteria per cubic centimeter after passing through our filters. Some of the samples after filtering have been sterile. We have never had colon bacilli in any of the samples. The filters are used and cleansed alternately. High-pressure steam is used for cleansing when necessary. Each employee has his own drinking glass, and consequently the chances of infection with any contagious disease by means of the secretions of the mouth or throat of others is very small. Water is so necessary for the various activities of the organs of the body, aiding secretions and excretions, food absorption and carrying away waste products, regulating body temperature, etc., that to encourage the drinking of sufficient water to help these various functions of the body, it is quite necessary that we know the quality of the water supply, and can assure the employee that it may be used as often as is necessary for drinking purposes, with no fear of infection. It is a comfort to know that, as far as bacteria content or colon bacilli are concerned, the water is perfectly safe. In this way one can readily see that fatigue poisons are diminished, and we attempt to prevent diseases that may be caused by impure water or the use of the common drinking cup. It is easy to understand that efficiency is increased

where wholesome drinking water is supplied, and without much study an economist can see the financial value of this side of the question.

REMOVAL OF DUST.—In regard to the removal of dust, absolutely no cleaning is done during office hours, and, as the vacuum service is installed throughout the buildings, the dust from the floors and rugs which is taken up in this manner is all centralized in one container in the basement of the building. A movable cleaner of this sort is now used for books, paper files, etc. The rubber coverings which are used in many of the corridors and aiseways for deadening the sound, and thus relieving unnecessary noise of those having to walk in, through, or to a department, have a sweeping compound distributed over their surface before they are swept. This is used on parts of the floor also. The use of the common duster is discouraged as far as possible, and this is used only where it is impossible to use other means of cleaning which would be practicable. When such dusting of necessity has to be done, the windows are thrown wide open and the electric fans started; no persons but the cleaners are about, and their exposure is slight, as the dust is quickly carried out the windows.

FLIES AND INSECTS.—As to flies and insects of any sort, we are especially interested in keeping these out of the infirmary and culinary departments, and by external vigilance they are kept down in all parts of the buildings by keeping out rubbish and dirt. In the infirmary the screens are kept on the windows throughout the year, and in the culinary department from April to December.

RUBBISH DISPOSAL.—Surgical dressings, wooden tongue depressors which have been used, and other material of like nature from the infirmary, are all subjected to incineration. The basements of the buildings are kept entirely free from all rubbish, which is carted away each day, and the walls are thoroughly whitewashed throughout the corridors and rooms in the basement of the buildings. Some of the basement corridors are painted and the floors are concrete. Notices are posted forbidding spitting.

LAVATORIES.—As to washing facilities and toilet arrangements, all the washrooms and toilets have marble floors and part of the side walls are marble. These are subjected to a thorough cleansing every day, and at least once a week to a thorough scrubbing with an antiseptic solution containing soap. As we do not advise the use of water in the toilet rooms for drinking purposes, because this water comes from our driven wells, proper notices to this effect are posted, and also notices with reference to the continual flushing of the toilets. Once a week disinfectant is used in each toilet basin throughout the buildings. Soap is provided for use in each toilet room. In some of the rooms liquid soap is used from a container. The roller towel has been replaced with individual towels of linen or paper, according to the needs. Several years ago the company supplied an individual drinking cup to each employee, and as employees enter the service they are given a similar cup. Such provision lessens the chances of skin infection or infection by the secretions of the mouth, throat, or nose. A matron is constantly going about looking after sanitary matters in the women's toilets. These have been supplied with machines for sanitary needs. Many of the toilet rooms are provided with an electric fan.

LOCKERS.—Each employee is supplied with a suitable locker which will hold the necessary articles of overclothing, and they contain the proper arrangements for umbrellas, overshoes, etc. The lockers we are installing now are metal.

DRYING ROOM FOR CLOTHING.—A drying room for

clothes has been installed, so that on very inclement days the clerks need not run any risk of catching cold on account of getting wet. Rooms for rest will be at their disposal, and the clothes returned to them in a few minutes perfectly dry. If any condition is noted tending to impair their health as the result of exposure in coming to the office on such days, the clerk or employee is sent home at once.

UMBRELLAS.—Umbrellas are supplied to the female clerks, if they apply for them, on rainy days.

TELEPHONE EXCHANGE.—The young ladies who do this work have, in addition to their noon lunch hour, an additional twenty minutes' rest period both in the forenoon and afternoon. Their surroundings and comfort are being constantly looked after, as their work is of such an exacting nature and requires the eye and ear to be constantly on the alert.

CULINARY DEPARTMENT.—In the culinary department, which includes the kitchen, serving room, dishwashing room, and dining rooms, great care has been taken to in-



Fig. 3. Prudential Life Insurance Company, New York. Physician's office in infirmary.

stall the latest improved apparatus for washing all the dishes and kitchen utensils. The floors and walls are kept scrupulously clean. All dusting necessary is done with moist cloths, and the table linen receives the utmost care and attention. The refrigerators are cleaned several times daily, and kept scrupulously clean at all times. The windows of the culinary department and dining rooms are all screened. In one dining room more than 1,200 employees can lunch at one sitting. The garbage from the kitchen and dining rooms is disposed of promptly every day. It is not subjected to incineration, but is carted away daily, the cans properly cleaned as soon as they are emptied and afterward subjected to a high pressure of steam.

MILK AND FOOD SUPPLY.—The milk and food supplied to the employees is a matter which receives great attention. The milk is received from a dairy which has a re-

liable reputation for having the latest devices for cleansing and pasteurizing. This milk is examined bacteriologically at intervals in one of the largest scientific laboratories in New York city, and I endeavor to make frequent inspections of this milk, which is classed as grade A pasteurized. We are assured that all of the cows are tuberculin tested, and we feel perfectly safe that no disease can result from this milk. The meats, poultry, and all food supplies to be served in the dining rooms are selected with great care and put in proper refrigerators as soon as received. This is quite necessary when you think of the number of people served in the dining rooms daily.

SAFEGUARDS, MACHINERY, ETC.—In the engine room, printing and bindery departments, and every place where machinery, electrical devices, etc., of any sort are used, they are all properly safeguarded. Either the protectors have been on the devices when purchased or attached to certain parts of the machinery after they have been installed. In this way accidents have been reduced to a minimum. The gates of all the elevators have proper safeguards and devices for the levers which open and close the doors. For absolute safety, no elevator man is allowed to leave his car during the time he is on duty, except by proper arrangement with the starter. The door of the car is not allowed to be opened until the car is brought to a full stop, and the car is not allowed to start until the door is closed. The elevators have electric appliances which regulate the movements of the car, so that they cannot be started until the doors are closed. The window washers are all supplied with safety belts, and under no consideration are they allowed to wash or clean windows, etc., without using these appliances. The fire captain maintains fire drills, and the necessary appliances in case of fire are placed throughout the buildings. Through the real estate department, efficiency committee, etc., problems along these lines which come up from time to time are given thought, study, and consideration, and our records show that the number of possible accidents have thereby been reduced.

INFIRMARY WORK.—All cases of sickness or accident are sent to the infirmary immediately. In order to facilitate this work, the company has recently set aside more room, and we now have one room for an infirmary and rest room for female employees, another for male employees, and another room which is used entirely for first aid, the consultation and examination of employees, and disability cases. Another room is used for the doctor's office, where the stenographer keeps disability and office records. The infirmary staff now consists of a physician and four graduate registered nurses. One of these nurses has been on duty a greater part of the time as a visiting nurse. In case of a very severe injury we arrange to have such cases taken immediately to the hospital to which the one injured may desire to go. In cases of sickness, if the ailment is such that there is extreme suffering and it is plainly seen that the patient is not going to get better speedily, he is sent to his home, or, if he desires, arrangements are made to take him to the hospital. Any case which has not recovered sufficiently to go home unaided is accompanied by some one from the office, and, if necessary, a private auto conveyance is arranged for, and in extreme necessity we have arranged that a private autoambulance is at his disposal and can be dispatched at short notice. Every attention, as far as possible, is given to the slightest detail for the comfort of those who are sick or sustain an injury, and the fact that their welfare is looked after so carefully along this line is greatly appreciated. Occasionally cases come before us where, for some reason, they are not able to assimilate their food, and other cases, which have com-

pletely convalesced after surgical operation or serious illness in their homes or at the hospital, are strong enough and desirous of resuming duty, but have slight pallor. If they so desire, it is arranged that, on the order of the physician or nurse, they may go to the rest room at 10:30 in the forenoon and 2:30 in the afternoon for egg and milk, or milk alone, as they desire. One of the nurses is detailed to give personal attention to these cases daily, and by frequent observations she can note the weight, general appearance, etc. The results in some of these cases are extremely gratifying. Some have gained as much as ten and twelve pounds in weight and the quality of their blood is better. There is the joy of feeling well, not being fatigued nearly so easily, and their efficiency has been greatly increased thereby. In addition to the extra nourishment afforded, there is, of course, the additional rest, and the fatigue toxins do not get a chance to diminish the vitality of such cases. We can thus see that the infirmary is a clearing house for practically all cases of illness or injury, and acts in the same capacity in reference to quarantinable diseases. Since the disability plan has been in operation, such cases naturally are taken care of by this department. All employees in the office who have any infectious or contagious diseases at home are to report same to the heads of their department immediately, and they are in turn referred to the infirmary, so that we can determine whether they should absent themselves from the office. In this way we are doing much to conserve the health and lives of those who are conducting the business at the home office. The visiting nurse carries good cheer and a kind word to those who are absent on account of disability. She is able to advise in many cases what is the best course of procedure so that they will soon be restored to health, and in addition she is encouraged by the physician in charge to keep him in touch with any complications or data which will aid him in giving proper consideration to any given case. In our infirmary and disability work we have the most cordial relations with the hospitals and sanatoriums, and also with the attending physicians, specialists, and dentists. In many cases the family physician asks us to cooperate with him in order to effect a cure. Where we find cases of incipient tuberculosis of the lungs, they are referred immediately to their family physician, and in return we are asked to cooperate in any sanatorium or other treatment which they decide on. Our experience in handling this class of cases has been very satisfactory, and today a number of cases which at one time were those of open or active tuberculosis have had the disease arrested and been restored to health, so that they could safely return to duty.

The following figures will give some idea of the work done during the last four years, showing the actual number of cases. The figures are considerably larger when the number of visits and treatments subsequently made are included:

	1912	1913	1914	1915
Sickness cases	2,984	3,946	4,344	4,396
Accidents on duty	432	291	280	275
Accidents off duty	163	334	332	426
Total cases treated.....	3,579	4,571	4,956	5,097
Cases referred to visiting nurse....	390	844	858	1,087
Visits made by visiting nurse.....	575	982	1,017	1,306

The grand total of visits and treatments for 1915 was 10,627.

DISABILITY, SERVICE RETIREMENT, AND SANATORIUM ALLOWANCES.—In case employees are disabled, they are paid according to their length of service. No contribution is required from them, but their regular compensation is continued as usual on account of disability, according to the plan which was announced by President Dryden in December, 1913. As to service retirement, this is also ar-

ranged for according to age and length of service. Pamphlets have been printed giving the entire plan of the disability, service retirement, and sanatorium allowances in detail. The following data will give some idea as to the methods and results as worked out for the, approximately, 4,000 home office and 13,000 industrial field employees:

ALLOWANCES DURING DISABILITY

Home Office Employees

For absences on account of disability not exceeding twelve days in the year, employees receive their regular compensation. For absences of six consecutive days or over, they receive the following allowances:

Length of service in complete years	Regular compensation paid	Disability allowance paid
1 year.....	2 weeks	2 months
2 years.....	3 weeks	3 months
3 years.....	4 weeks	4 months
4 years.....	5 weeks	5 months
5 years.....	6 weeks	7 months
10 years.....	11 weeks	18 months
15 years.....	16 weeks	29 months
20 years.....	21 weeks	40 months
25 years.....	26 weeks	50 months
30 years.....	26 weeks	56 months

The disability allowance is at the rate of 35 percent of the regular compensation, but never less than \$20 nor more than \$125 a month.

The company, in addition to the service disability allowance, will in its discretion, when desired, provide tuberculous employees who have been at least three years in the company's service, treatment at the nearest suitable sanatorium for a period not exceeding twenty-six weeks, and also pay traveling expenses to and from the sanatorium.

Industrial Field Employees

During the first four weeks of disability, employees who have served more than one year receive their regular compensation, after which they receive the allowances shown in the following schedule:

Length of service in complete years	Disability allowances paid	Length of service in complete years	Disability allowances paid
1 year.....	2 months	10 years.....	18 months
2 years.....	3 months	15 years.....	29 months
3 years.....	4 months	20 years.....	40 months
4 years.....	5 months	25 years.....	50 months
5 years.....	7 months	30 years.....	56 months

The rate of disability allowance is \$40 per month to agency organizers and assistant superintendents and \$30 to agents. Tuberculous employees who have been at least five years in the company's service may, if they so prefer and with the company's approval, receive, in place of the service disability allowance, qualified treatment in the nearest suitable sanatorium.

In the case of married tuberculous employees receiving sanatorium treatment, the company, in addition to the payment of the cost thereof, may pay to the wife or dependent children of the same, or both, such portion of the service disability allowances otherwise payable to the employee as in the judgment of the company would be justified by the special circumstances of the case.

SERVICE RETIREMENT ALLOWANCE

After twenty-five years' service, employees of the home office and industrial field forces may retire on arriving at the age of 65 (age 60 for females). The retirement allowance is at the rate of 1 percent for each year of service rendered, computed on the average annual earnings during the last ten years of service. In no case, however, is the retirement allowance less than \$30 nor more than \$100 per month. The amount of retirement allowance paid is shown by the following schedule:

MONTHLY RETIREMENT ALLOWANCES

ON THE BASIS OF AVERAGE ANNUAL EARNINGS FOR THE LAST TEN YEARS
OF SERVICE

Length of service	\$600	\$1,000	\$1,500	\$2,000	\$2,500
25 years	\$30.00	\$30.00	\$31.25	\$41.67	\$52.08
30 years	30.00	30.00	37.50	50.00	62.50
35 years	30.00	30.00	43.75	58.33	72.92
40 years	30.00	33.33	50.00	66.67	83.33
45 years	30.00	37.50	56.25	75.00	93.75
50 years	30.00	41.67	62.50	83.33	100.00

INSURANCE ON THE LIVES OF FIELD AND HOME OFFICE EMPLOYEES.—On July 17, 1916, President Dryden announced to the industrial field staff and the home office force that the company would insure the lives of its employees without any cost to them, whether on the active or on the retired list, for the amounts indicated in the following schedule, and that on the death of any such employee while in the service of the company there will be paid, in one or more installments, to the person or persons appearing to the company to be equitably entitled thereto, the sum so insured:

When the length of service of such employee has been less than one year	\$ 500
When the length of service has been one year, but less than five years	1,000
When the length of service has been five years, but less than ten years	1,250
When the length of service has been ten years, but less than fifteen years	1,500
When the length of service has been fifteen years, but less than twenty years	1,750
When the length of service has been twenty years and over	2,000

Except in the cases of employees on the retired list, the foregoing shall apply only to persons whose whole time is given to the service of the company.

The plan announced above should not be regarded as taking the place of any personal insurance which the employees of the company may wish to carry, and does not apply to the officers or directors of the company.

OFFICE HOURS AND VACATIONS.—The office hours during each working day are from 8:30 to 12 and 1 to 4. Saturday is a half holiday during the entire year. Vacations are arranged for according to the length of service, and only in very few instances—those of beginners—are vacations less than two weeks. Some of the older employees enjoy as much as four weeks. In addition, a special day is granted every thirteen weeks for promptness, punctuality, and special care and attention to their duties.

REST AND RECREATION.—As to rest and recreation, the general welfare of the employees is being considered, and, in addition to those who have the privilege of going to the rest or recreation rooms, it is desired as far as possible that all employees should absent themselves from their desks or departments during the entire lunch hour, from 12 to 1, so that they have sufficient time for luncheon and a short walk in the fresh air and sunshine, or for any other diversion which may be of benefit to them. Each working day the clerks enjoy a recess at 10:30 a. m. and 2:30 p. m., so that no period during the day is longer than one and one-half hours, excepting the first period, from 8:30 to 10:30 a. m. During the past year a recreation and game room has been fitted up for and is thoroughly enjoyed by the men. The women's recreation room is well equipped, and the many delightful appointments make the room very popular. One-half of this room, which is 144 feet long, is reserved for dancing. In the balance of the space calisthenics, games, etc., may be indulged in. Rest and recreation are very important, as they tend greatly to reduce fatigue toxins and efficiency is thereby increased.

CONCERTS, ETC.—During the noon hour concerts are arranged for in the assembly hall on inclement days, and there are regular features several times each week, movies, etc. The company usually arranges for a series of

entertainments during the fall and winter months. These are given on Fridays at 4:15 p. m., according to schedule.

FIELD AND ATHLETIC GAMES.—The company's athletic association has charge of all the athletic and recreative sports, and, in addition to tournaments, cross-country runs, athletic meets, and games which are held at different times during the year, has at least once a year a field day, and the entire office force is given the privilege of enjoying this outing. This association has over 1,300 active members, and they are doing a great deal to help themselves along the lines of hygiene and health, and are receiving the active cooperation of the president and other officers of the company.

I have attempted in a very hurried manner to give you an outline of some of the things which the officers of the company have worked out for the general well-being and physical welfare of the employees. In view of the fact that all applicants for positions are now subject to a medical examination, we are able to safeguard the health of the employees to begin with, and, as they are taught from time to time both by personal contact in the infirmary, by health articles which are printed in pamphlet form and by other matters of hygiene interest which appear in the *Home Office News*, the young men and women are beginning to learn more about the laws to be observed as to the care of their bodies and what it means to have a sound mind in a sound body. It has been said that "life is not only to live, but to be well." How true this is and what joy there is in work, mental or physical, when we feel strong and well. Preventive medicine is, therefore, true conservation, and this adds to the efficiency of those who are actively engaged in any kind of industry or line of business.

Pierce-Arrow Motor Car Company, Buffalo, N. Y.

The Pierce-Arrow Motor Car Company has been conducting "welfare work" since moving into its present plant in 1906, and the spirit and scope of the plan has grown with the years. The factory buildings, now comprising some 1,219,094 square feet of floor space, are practical examples of what may be accomplished in providing the maximum of light, fresh air, and comfortable temperature in all seasons to the end that employees may perform their work in pleasant, sanitary, and healthful environment. The buildings are of reinforced concrete construction, and the entire outside walls of the four-story buildings, aside from the columns and a small area beneath the sills, are made up of windows. This, coupled with the fact that none of these buildings is over 62 feet wide and that there is an open court almost as wide between buildings, insures ample light during the daytime, and satisfactory artificial light is, of course, provided for use during the short winter days and at night.

The plant engineers have given considerable attention to the heating and ventilating problems. The old buildings are heated by forced hot air circulation, with underground ducts leading to the different floors to supply them with hot air, and the new buildings are heated by direct radiation, using forced hot water, which is heated by exhaust steam from the power house.

An interesting sight is the serving of over 900 men at one time in the large dining room. The meal is rightly termed "noon dinner" instead of "noon lunch," as it is the contention of the company that men who work hard need a good dinner at noon and not merely a light, cold lunch. The charge for the meal is 15 cents, but this does not cover the cost. The meal consists of soup, meat, potatoes, vari-

ous vegetables—such as rice, beans, or turnips—with bread and butter, and tea, coffee, or milk. In addition to one serving of meat, a man may take as much as he wishes, so that no one need leave the table with a craving for further nourishment. The menu is changed every day.

There are thirty-nine tables, each seating twenty-five

contrivances are found here, and an expert chef supervises the preparation of all food. The club kitchen is entirely separate from that used for preparing the food for the large dining room. A completely equipped bakery supplies all bread, pies, and puddings.

A modern ice plant is provided for preserving meats

and vegetables, and to supply water to the drinking fountains, of which there are a large number in the factory and office buildings. The water used in these fountains is filtered through an electric device, which purifies it and destroys all germs.

In the basement of the administration building is the laundry, where table linens, caps, aprons, coats, etc., used in the kitchens and dining rooms are washed and ironed. The towels used in the plant are also washed here. The illustration (Fig. 1) shows the arrangement of the laundry, and attention is directed to the provisions for the safe operation of the machinery. It will be noted that all shafts, belts, and pulleys are fully guarded. On the extractor, for instance, it is impossible to open the cover while the machine is in operation. The ironing machine is provided with a special mechanism to stop it instantly if necessary.

The illustration of the wash room (Fig. 2) shows the arrangement of individual wash bowls, and each bowl is provided with hot and cold water and individual cake of soap. Just before the noon and evening whistles thousands of towels are piled above the wash bowls, so that every worker may leave the factory as clean as when he entered.



Fig. 1. Pierce-Arrow Motor Car Company, Buffalo. Laundry showing how shafts, belts, and pulleys are guarded.

men, and a waiter is provided for each table. These waiters are selected from young men in the shop departments, where their absence does not interfere with any process of manufacturing. They leave their work at 11:15, wash, and have their dinner at 11:30, which is furnished to them without charge. Just before 12:00 they place the food on the tables, and until 12:30 are occupied with serving the employees. They then have from 12:30 to 1:00 for their noon recess, returning to their work at 1:00. At the end of the dining room is a table reserved for those young ladies employed by the company who wish to eat there. There is also a small separate dining room provided for those who wish to bring their lunch, where coffee, tea or milk is served at cost.

In the center of the dining room is a grand piano, and each noon a pianist, selected from among the employees, adds to the pleasure of the noonday meal. Before each holiday there is a song festival, in which all employees participate, and it is inspiring to hear a thousand men join in Christmas carols and patriotic songs. That this form of entertainment appeals to the men has been proven by the formation of the Pierce-Arrow Glee Club. The administration building also contains what is known as the club dining room, where a somewhat better meal is served than in the large dining room, and the charge for dinner is 25 cents.

The mammoth kitchens compare favorably with those to be found in any first-class hotel. Modern devices for the sanitary handling of food and mechanical labor-saving



Fig. 2. Pierce-Arrow Motor Car Company, Buffalo. Individual wash bowls and lockers.

Each employee has at his disposal a full-length, sanitary steel locker, to which he holds the key, and a section of these may be seen at the farther end of the wash room. Ample space is provided in the basement of the administration building for employees' bicycles and motorcycles, and there are also places outside for parking employees' automobiles.

When the company officials noticed that the men congregated about the Benevolent Association store at noon, a piano was installed, and during the winter months talent from among the workers alternates in giving short entertainments during the noon recess. This gave rise to the idea of something more permanent and comprehensive,



Fig. 3. Pierce-Arrow Motor Car Company, Buffalo. Candy and cigar stand.

and the Pierce-Arrow Glee Club was formed, which a short time ago gave an elaborate entertainment and dance in one of the large convention halls in Buffalo.

The management has always encouraged the men to take advantage of the educational facilities offered by the city at the various night schools and those provided by the local Young Men's Christian Association and other such institutions. At different times the company has had representatives of these schools come to the plant and give talks to the men, describing to them the advantages to be gained by a better education. Bulletin boards about the plant carry literature describing in detail the courses available at these schools.

A branch of the Buffalo Public Library is located in the plant, which is open every noon, affording employees an opportunity of selecting from several hundred books on subjects applying directly to the work and others of general interest to the book lover. In case a man wishes a book which is not included in the plant assortment, he fills out a request form, and the next day will find the book awaiting his call.

Recently the company has established an apprentice system. This is restricted to a very small number, and is very similar to the usual apprenticeship courses. A young man entering this course goes from one department to another at regular intervals until he has completed the three-year course, the idea being not so much to fit him for any particular trade, as to enable him to take executive positions. The young men are generally selected on account of certain traits of character,

and are expected, without being asked, to take some course in the evening high school or local institution to help them in the theoretical knowledge that is necessary to make them proficient in the line of work for which they are fitting themselves.

The first aid and safety division is under the supervision of the employment department. This division employs a graduate physician and a practical nurse, and, in addition to the treatment of shop injuries, the men are welcome to use the services of this division for minor injuries received outside of the plant. The men have taken advantage of this privilege, and come to the first aid for medical consultation and advice, where practical, simple remedies are given without charge. Very often an employee has averted some serious illness by timely treatment, as men will consult the first aid in cases where they would not call at the office of an outside physician, thinking that they are hardly ill enough to go to the expense and trouble of such visit.

The first aid has recently given a thorough medical examination to each employee desiring it. The examination is not compulsory, except where a man is engaged in an occupation

where his health must be at the very best to perform the duties, such as heavy lifting, when it is necessary that a man be not ruptured and that he be otherwise in good physical condition. In the sand blast operation, in spite of the fact that our ventilation is the best that can be obtained, a man's lungs should be in perfect condition. It is interesting to note the result of these

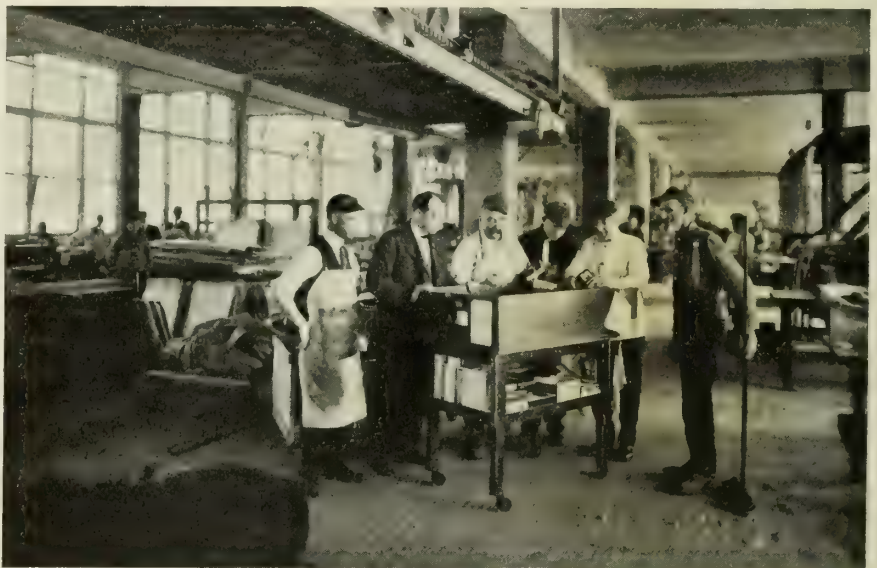


Fig. 4. Pierce-Arrow Motor Car Company, Buffalo. Carts for delivering candy, tobacco, etc., in the factory.

examinations, as in a number of cases conditions have been revealed which, if not attended to at once, would have seriously impaired a man's health, and in a few cases would have been the cause of death. Among several hundred that have been examined there has not yet been a case where an employee has lost his job because his health did

not warrant keeping him in the employ of the company, but there have been cases where it has been necessary to change an employee's position, as the state of his health would not permit him to continue the work he had been doing.

The safety division is in charge of a safety engineer, who devotes his entire time to inspection and safety work. He is chairman of the safety committee, which is composed of forty-eight foremen and fourteen workmen. Three new members are added each month to take the places of three retiring members. Each member has a certain part of the plant to cover for inspection, and he reports to the chairman whatever he may find unsafe, and the matter receives prompt attention. If for any reason it is not found advisable to act on a suggestion, the reasons are given to the committeeman, so that he may feel that some thought has been given his suggestion. Disputed points are discussed at the committee meetings, which are held semi-monthly. These meetings are of importance to the safety work, and are held on the company's time, so that the workmen do not suffer any loss. A man on the safety committee takes particular pride in seeing that all safety rules and regulations are carried out in his district, and this habit continues with him even after he has retired from the committee. Surprising are the valuable suggestions for safety that these men bring to the attention of the safety engineer—matters which he would not ordinarily observe.

The Employees' Benevolent Association, organized by the employees to provide a sick and death benefit to its members, has the full encouragement of the management. While the management does not directly contribute to this association, it in many ways materially fosters its advancement, and for several successive years the vice-president of the company has been unanimously elected president of the association. The dues are only 40 cents per month, which is not, of course, sufficient to pay the running expenses. The association pays \$6 per week for thirteen weeks to a member when sick and a death benefit of \$100, and maintains the services of a physician, who will attend cases of illness.

One of the sources of income for the association is the candy and cigar store in the basement (Fig. 3), and, in addition to this, three men with carts (Fig. 4) continually go about the plant during working hours supplying the men with candy, tobacco, cigars, etc. These carts are objects of considerable curiosity to the average visitor, but, when the nature of their convenience is explained, it is conceded that the spirit which this feature creates among the workmen is of mutual benefit to the employer and employee.

Besides the benevolent association there is a relief fund for those employees who have drawn the full amount to which they are entitled from the association and still need assistance, and for those who, on account of physical defects or old age, are not able to enter the association. This relief fund is maintained by the profits from the sale of tickets to nearby summer resorts, by library fines, the annual shop picnic, money collected from employees buying hard scrap wood from the body mill department, which the company donates, and from the sale of certain articles at the candy and cigar stand.

International Harvester Company, Chicago, Ill.

BY GEORGE A. RANNEY, Secretary and Treasurer International Harvester Company.

Our language lacks the easy word or phrase that will exactly fit the Harvester Company's theory and plan for efforts toward improving the condition of its employees. "Welfare work" is the generally accepted term in common

use; "industrial betterment" is, perhaps, more precise, but it is rather awkward. So "welfare work" it must be until the terminologists in this field of applied sociology give us something more acceptable.

We hold that any valid attempt at industrial betterment must provide reciprocity of benefits. If the betterment endeavor does not lead to benefit to the employer as well as the employee, then it not only lacks business justification, but is likely to become obnoxious to the employee as charity, faddishness, or, perhaps, meddling. If it brings no benefit to the employee as well as to the employer, it is mere selfishness.

Welfare work of any kind presupposes as a foundation good wages and good working conditions. Fair compensation is the primary obligation of the employer to the employee for service performed, and he is equally bound to see that the hours are reasonable and that the service is rendered in safe and sanitary surroundings. No sound plan of industrial betterment attempts substitution of any kind in these respects.

Careful adherence to this theory, one may think, has put and kept the Harvester Company's welfare activities on a plane of practical effectiveness; it probably helped us to earn an exceptional commendation. I refer to the bulletin of the United States Bureau of Labor Statistics, published May 15, 1913, which said: "Too often welfare work is whimsical, the outcome of the particular fad of the president of the company, emphasizing unimportant details and failing to see the significance of such work. This charge cannot be made against the International Harvester Company's welfare work."

For the first few years of the company's life these activities were carried on through the organizations of the numerous plants. Obvious defects in that system, and desire to standardize and unify all such efforts, brought us to full coordination and concentration in a new company department, with an advisory board, executive committee, and other officers headquartered in and operating from the general offices. Under this plan the work has developed consistently and with satisfactory results.

Briefly, and giving precedence to the factors that make for the employee's health, our efforts may be summarized thus:

MEDICAL SERVICE.—Directed and conducted by a company staff of fifteen physicians on full time, a number on partial time, and seven graduate nurses, with medical quarters at each plant; examination of all applicants for work to guard against infectious diseases and to insure reasonable physical efficiency; annual inspection of all employees; emergency attention in hospital rooms at all plants; dental department established at McCormick and ordered at Deering, with free examination, emergency work, and cleaning.

HOSPITALS.—Rooms equipped for emergency medical treatment maintained at all plants; new emergency hospital at the McCormick works in separate building just erected for the purpose; similar hospital building ordered at the Deering works.

ANTITUBERCULOSIS CAMPAIGN.—Directed by a staff consisting of a tuberculosis specialist, a specially qualified assistant, and a specially trained nurse, with the assistance of the general medical staff and visiting graduate nurses; annual examination of all employees in plants and in the general offices, with frequent reexamination of suspected cases; published instruction in prophylaxis through the company's house organ; treatment of all active cases (70 percent in the sanatorium), the company and the benefit association sharing the sanatorium expense with the em-

ployee, and the company, when necessary, aiding in care of the family to relieve the patient's mind.

PREVENTION OF OCCUPATIONAL DISEASE.—Regular and frequent medical inspection and constant supervision, with recommendations of changes; standard precautions against lead-poisoning; protection of paint shops; dust removal; exhaust system for all dusty jobs.

SAFETY FIRST.—Standard protective equipment on all machines; safety inspector in each plant; investigation of all accidents and recommendations of changes where advisable; publication of rules and instructions in ten languages; constant education of employees and efforts to secure their cooperation.

SANITATION.—Directed by medical staff; regular and frequent sanitary inspection of plants and offices; aisles and corridors kept clear; no dry sweeping; standard toilets, drinking fountains, wash sinks (running water only), shower baths (where needed), wash and toilet room floors, cuspidors, ventilated metal lockers; drinking water frequently analyzed, artesian wells being driven where local supply is unsatisfactory; special suction fan and exhaust ventilation where needed, with International Harvester Company special machinery to draw off twine mill dust; abundant natural light where possible, with International Harvester Company standard artificial lighting.

HYGIENE.—Rest rooms and matrons at all plants where women are employed; prohibition (in advance of statute) of night work by women; Saturday half-holiday throughout the year in all plants in North America and in the general offices.

EMPLOYEES' MUTUAL BENEFIT ASSOCIATION.—Supported partly by the company and partly by employees; managed by trustees, half chosen by the company and half by employees; sickness benefits, one-half wages for fifty-two weeks; death benefits, one year's wages; total benefits paid in seven years, \$1,750,000.

PENSIONS.—Paid out of a company appropriation of \$100,000 a year; rate, 1 percent of average annual earnings for last ten years of service for each year of active service, with minimum of \$21 and maximum of \$100 a month; board has discretionary power to continue pension to widow or orphan.

THRIFT.—After successful experimentation, beginning in 1909, with the assistance of employees toward stock-sharing, the company announced in December, 1915, a five-year plan, combining savings inducements, service bonuses, profit-sharing, and stock participation. Up to June 1, 1916, more than 20,000 employees had taken advantage of this plan, having subscribed for more than \$5,500,000 of profit-sharing certificates.

RECREATION.—Club houses at McCormick and Deering works, club rooms at other plants; bowling, pool and billiards, library, meeting rooms, and auditorium in club houses; foremen's clubs at the plants to promote sociability, etc.; annual works picnics.

It is a debatable question whether there are substantial reciprocal benefits in welfare activities directed to the recreational and special advantage of employees. Where the plant is located in a large city, with abundant opportunity ready at hand for the employees to provide their own amusements and recreations, and with many of them living at a considerable distance from their work, it is easy to understand why they should find comparatively little need for club houses, and should be only mildly interested in athletic associations, baseball leagues, or other company contributions on the recreational side. If the plant be isolated, or in a town relatively too small to furnish such opportunities, company activities of this kind might

be indicated as desirable. The annual plant picnic is, however, a pleasant and possibly beneficial incident of factory operation, affording the employees and their families opportunity for an outing and reunion under wholesome conditions.

It may now be recalled with a degree of amusement how, a good many years ago, in the early days of welfare work, one of the original companies promoted a rather ambitious musical effort in its twine mill. Somebody got the idea that it would be a good thing to get up a musical club among the young women in that department. The club was a great success. Many of our girls took to it eagerly; some of them soon developed voices that were worth while and a capacity for faithful study and practice. Then the idea broadened. It was decided to produce an opera, "The Pirates of Penzance." The girls in the cast and chorus were given an hour off twice a week for rehearsals. The little theater first engaged was so heavily oversubscribed that we rented another and much larger house on the West side and filled it for five performances, admission being free to employees and their families. The show, like the club, was a gratifying success.

But, after it was all over, most of the girls who had taken part could not see why the two hours off a week should be discontinued—they had got the habit. Some wanted to go on the stage professionally, and some, I believe, did. The upshot of this affair was that we lost practically all the forty or fifty young women who had been in the opera. This experiment could not have done the employees much good—all the company got out of it was some useful experience.

It is at least questionable whether the employer has any right to try to follow the employee home from the factory and intrude on his domestic and social life, nor should there be any need for it in a city of considerable size and decent government. The problems of housing and education belong properly to the state, and the employer, as I see the matter, is warranted in exerting himself only when necessary toward the state's performance of its functions.

There can be no question about the reciprocity of benefits in every item of welfare work that guards and promotes the health of the employee. Health is a *sine qua non* of industrial efficiency. The employer may logically and reasonably expect that the safeguards and adjuncts provided for the worker's physical well-being will be paid for in the worker's sustained and increased effectiveness.

As for systematic encouragement of thrift, that, too, has benefits working both ways. The saving man, careful of his money, is likely to be careful of himself in all respects; necessarily he will be more careful of company property and responsibilities. The employer of experience and discernment in welfare work will realize the futility of trying to use any thrift, profit-sharing, or stock-participation plan for his own ulterior purpose; yet he may properly expect that such endeavors, properly worked out, will tend to produce a closer community of interest in the business.

The Harvester Company finds reason for gratification and encouragement in the fact that the provisions of its voluntary plan of accident compensation are markedly similar to those of the Illinois statute subsequently enacted; in the fact that its antituberculosis campaign has brought the rate down to one-fourth of the general population ratio per 1,000; in its largely decreased figures of industrial accident and occupational disease; in the remarkable success of its new profit-sharing plan. It looks forward to even more fruitful endeavor in the future, be-

ing convinced that work of this kind is never completely done.

In all that the company has attempted and accomplished along these lines, it has proceeded, first of all, from a sense of responsibility to the men and women of its industrial family—from a desire to be genuinely and practically helpful to them and to the communities of which they are a part. It has been fortunate as to these things in the fact that its principal owners are people with a strong sense of individual responsibility and stewardship toward all their fellows—people who see in any work for humanity, inside or outside their business, a duty to perform and happiness to be achieved.

In the Coal Mines

For the past twenty years legislatures have been enacting laws to provide for the safety and physical welfare of coal miners, but almost without exception these laws have been preceded by voluntary action on the part of the leading coal mine operators looking to the physical,

rooms underground, and specify the details of such stations, but the operators themselves have realized in a large measure their responsibility for the physical, mental, and moral welfare of their employees, and have gone about the systematization of this welfare work in a way that promises well for the future.

The isolation of most coal mining communities has lent itself nicely to the purpose. Good streets have been made in the coal mining towns, fringed with ornamental and shade trees, flower gardens have been created in connection with village playgrounds, in some cases the operators have offered prizes annually for the prettiest gardens and the best kept lawns about the homes of miners, and in many places there has been a forester and florist employed for the purpose of helping to beautify the homes and surroundings. Athletic fields have been set apart and dancing pavilions have been built for the young people to enjoy themselves. In some mining villages club houses have been built, with reading rooms, billiard and pool rooms, bowling alleys, and the like.

At most mine exits, especially in the larger mining



Fig. 1. Kingston Coal Company, Kingston, Pa. Operating room of No. 4 colliery.

mental, and moral betterment of their employees. While in some localities and under some operators conditions are still far from ideal, a majority of coal mine operators have bettered the condition of their employees, and a vast majority of the miners have now available living conditions fairly approximating those in other industries.

The state laws of Pennsylvania provide for hospitals above ground where more than ten miners are employed, they compel operators to maintain emergency hospital

communities, bath houses have been built, where shower and tub baths have been available for the miners as they quit their work with each changing shift, and it is almost the universal practice to use these baths before going to their homes.

Stimulated by the Carnegie Relief Fund of Pennsylvania and the systems of the Pittsburgh Coal Company, the H. C. Frick Coke Company, and the Philadelphia & Reading Coal and Iron Company, relief funds have been

created for the benefit of those hurt at work or who are ill. Connected with some mines, pension systems have been inaugurated and pension funds created, usually participated in by the miners to the extent of a small monthly amount, varying from 25 to 50 cents, but in many mines there is no contribution made by the employees to relief

Unfortunately many mines are still back in the dark ages, but these are fortunately paying the penalty by the refusal of the better class of miners to continue in their employment, so that self-preservation is rapidly driving mine operators everywhere to a better recognition of the humanitarian side of their business.



Fig. 2. Kingston Coal Company, Kingston, Pa. Mine hospital of No. 4 Colliery.

funds, and, regardless of any legal liability, the operators are providing these funds out of their resources. In a number of mines the pension fund, also provided by the operators, is ample to care for those who have become incapacitated at their work, or who are too old to longer continue in the work, and recently a movement was begun to rearrange insurance rates for coal miners, predicated on the installation of more and better safety devices and

Armour & Co., Chicago, Ill.

Situated in the heart of the large Armour packing plant in Chicago, of easy access to all departments of the plant as well as to the general office, are a well-equipped emergency hospital and welfare station. Something of the scope and character of the work which the hospital and welfare station are called on to perform may be inferred from the statement that the Chicago plant employs 10,500 individuals, who represent subsidiary trades as widely divergent as hand engraving and blacksmithing, as well as representing many kinds of skilled and unskilled labor directly incident to the preparing of packing house products. A considerable number of the employees are foreign-born, and among these are several hundred young women and girls. Except in emergency cases, the more Americanized and better circumstanced employees naturally depend for the most part on outside sources for medical attention, though many, even of the office force, seek advice from the hospital doctors. Among the foreign-born, however, is the largest field calling for the services of the hospital and welfare department. The services extended to these do not stop with emergency cases, but reach out to a supervision of their general well-being.

The hospital and welfare station are located in apartments arranged in one of the plant buildings. The rooms are light and commodious, and finished in the regulation white enamel. They include reception rooms, consultation

room, doctor's office, hospital ward, operating room, an x-ray laboratory, and a pathological laboratory. Separate waiting, rest, and consultation rooms are provided for women. With the clean white walls, simple decorations, and provisions for the quiet and comfort of the patients, one meets in these rooms the refined business-like atmosphere characteristic of a modern hospital. Three doctors and a staff of nurses, together with office attendants, are in charge. The place is well equipped with medical supplies and surgical apparatus. A private ambulance is maintained to transfer patients to a city hospital or to their homes when such course is necessary. The pathological laboratory, which is an important feature, has facilities for pursuing thorough research work in the diagnosing of cases which come under the attention of the hospital.

More interesting, however, than the equipment of the hospital and welfare station are the methods employed in conducting their work. These methods were adapted some time ago to meet the sociological conditions encountered in the plant. Previous to their adoption only the emergency hospital feature was maintained. This arrangement was found to be ineffective so far as the women employees were concerned. Many of these were unacquainted with the English language, and were superstitiously ignorant of American customs. They were afraid of a doctor, and fearful of reporting their illnesses lest they lose their jobs or suffer a reduction for time lost.



Fig. 3. Mineral Railroad and Mining Company, Shamokin, Pa. Mine hospital of Cameron colliery.

a more scientific control of the mines themselves, from the standpoint of safety.

As the great majority of coal miners are of foreign birth, many operators have conceived it necessary to provide schools, not only for the children, but for those who work in the mines, and these school systems are in many places on a par with metropolitan school systems.

Accordingly this company introduced a welfare department, installed nurses, and reorganized the entire service so far as the women were concerned. The methods now in force might be called a paternal system—or maternal, if you choose—of looking after the physical well-being and, so far as possible, the social welfare of the women

without fostering the spirit of dependency among the recipients of favors. The girls and women are at all times urged, wherever they have resources for looking after themselves, to consult their own family physician, to see a dentist, or go to an optician. When they have not the necessary resources or initiative for doing these things—

and the nurses in every case are familiar with the home circumstances—the nurses take them in charge and see that their needs are supplied. Often this means going the full extent of charity, with a large draft on the emergency fund. Girls are placed in sanatoriums or hospitals, where they receive care and treatment which would be out of the question were they left to their own resources. The case is on record, for example, of a girl who showed signs of nervous breakdown. While she experienced no particular aches or pains, and even her immediate relatives failed to regard her case as in any wise serious, it was deemed necessary to send her on a period of rest. Accommodations were secured for her in a sanatorium, and within a few weeks she was able to return restored in health and strength. The girls understand that they are welcome to come to the nurses for friendly advice on any of



Fig. 1. Armour & Co., Chicago. Reception room of the emergency hospital.

employees. The men, less fearful and diffident about applying to the doctors, avail themselves freely, by their own initiative, of the services offered. There is no passport or red tape involved in securing aid; the doors of the hospital and welfare department are wide open and all services are free. Anyone may apply for help, and those who ought to apply, but do not, are brought in.

The strictly emergency cases are for the most part minor ones, such as a cut or bruised finger, which needs medication to prevent infection. Aside from such cases, however, the doctors and nurses are always on a sharp lookout for symptoms of pathological conditions. The nurses make periodic visits among the women and keep in intimate touch with their physical conditions. Wherever symptoms of anemia, nervous or physical exhaustion, or any other disorder, are detected, a thorough examination and diagnosis are made, and steps taken at once in behalf of the patient. In every case of this kind the patient is given the necessary instruction as to diet, exercise, fresh air, etc., and treated, or advised to consult the family physician, or placed in a hospital or sanatorium, according as the case may require.

Among the women particularly, who stand most in need, the charitable services of the welfare department and hospital are exercised to an extensive degree. While there are, of course, the dangers in too free and obvious charity, the nurses in the department were trained in the Visiting Nurses' Association, and understand how to dispense aid

their personal affairs, whatever the difficulty may be.

Every day a report from the superintendent's office is handed to the nurses, giving the names of any women who have been absent for two days on account of illness, and the nurses call at their homes. There she gives such professional service as is necessary, and sees to it that the



Fig. 2. Armour & Co., Chicago. Dispensary of the emergency hospital.

patient is put into a fair way for recovery. Visits to the plants are made at the noon hour, and the girls are given talks on personal hygiene.

The welfare department works in close conjunction with the settlement houses in the stock yard district. The intercommunication among these and the welfare department

bring to light cases for action which might otherwise be overlooked.

In addition to the medical and surgical service performed, an extensive activity of a general welfare nature is conducted. The nurses go out on daily rounds of visiting among homes of the employees of the class who may need such attention. They preach the gospel of fresh air and sanitary living, and gather information regarding the home conditions of the workers in the plant. Sometimes they are instrumental in bettering housing conditions. They advise mothers about their daughters, and perform the innumerable services which come properly within the function of a visiting nurse or a settlement worker.

In this way the company keeps an accurate record of the welfare of its plant employees. The aim is to keep them healthy, contented, and well conditioned generally. This is good humanitarianism and good business combined, and has its beneficial effects reflected in the character of the work turned out by the employees.

Parke, Davis & Co., Detroit, Mich.

Parke, Davis & Co. maintains a first aid hospital at its plant. The general welfare work of this character is in charge of Dr. C. I. Iber, and the hospital is fully equipped for first aid work. Safety appliances and a general re-

branch of the Grace Whitney Hoff League, and the other is a purely Parke-Davis organization known as the Women's Association. The former, which has branches in all large industrial concerns in Detroit, is under the auspices of the Young Women's Christian Association. Membership entitles the girl to attendance at classes held twice a week and to gymnasium privileges; also to a room in a hospital and a trip to an outing camp at very nominal rates. The Women's Association holds classes in cooking, sewing, millinery, physical training, and elementary English, the instructors being provided by the firm.

Miss Mary T. Buckley, president of the Women's Association, who has been with the firm nearly fifteen years, and who has excellent judgment, based on a thorough knowledge of conditions, is much interested in the welfare of the women. She goes into the homes of women employees who are sick, looks up absentees, counsels the girls in a general way, and listens to their individual grievances if any arise. She has also charge of the employees' library.

The girls have a large recreation room, which is enjoyed jointly by the two clubs. Entertainments are arranged twice a week during the noon hour, some of the best talent in Detroit and other cities being presented. Musical numbers predominate, but there are often readings, and occasionally a brief lecture by some well-known



Fig. 1. Parke, Davis & Co., Detroit. First aid and dressing room.

gard for the welfare of employees render serious injuries of rare occurrence, and, as far as accidents are concerned, Dr. Iber's work is confined almost wholly to first aid ministrations.

Quite apart from the hospital work are two women's organizations, which look after the women employees in a general as well as a medical way. One of these is a

authority. The recreation room contains, in addition to the usual accessories, two pianos.

Under the auspices of one of the organizations mentioned there are a glee club, dancing club, dramatic club, and tennis club. Dancing parties are held monthly during the cooler seasons.

The employees' library contains over 2,000 volumes, and

more than 190 periodicals are circulated. The usual library regulations prevail with respect to the books, and magazines may also be taken to the home. Each employee is entitled to the home privilege of ten periodicals a month.



Fig. 2. Parke, Davis & Co., Detroit. Dancing pavilion.

A feature of welfare work which has met with considerable favor is the savings account system for girls. This was established in February, 1914, and the employees now have many thousand dollars to their credit. Each girl main-



Fig. 3. Parke, Davis & Co., Detroit. Women's restaurant.

tains her separate account, the amount she designates each month being deposited in an outside savings bank. All details in connection with this feature are looked after by the firm.

Once each year the firm gives its employees a holiday



Fig. 4. Parke, Davis & Co., Detroit. Men's cafeteria.

excursion, which takes place in June, and the entire plant is closed for the day without loss to the employees. The house charters two large excursion boats, and prizes are donated for field sports and athletic events.

An organization of executives, heads of departments, and their assistants is known as the Goodfellowship Club. Meetings are held four times a year, and a special fund is devoted to the sending of flowers to the bedside of the sick.

Two cafeterias are maintained, one for the men, the other for the women, both being under the same outside management, and the firm furnishes the rooms, light, heat, etc. The schedule of prices is a part of a written contract, and the price of a good lunch or meal is nominal.

An ample pension system provides payments for employees of a certain age who have been in the service of the house twenty years or more.

A fire department is a picturesque part of the organization. A call is often sounded when a large gathering of visitors is going through the plant, and the quick response and efficient exhibition adds an element of thrill to the sight-seeing.

Brown & Sharpe Manufacturing Company, Providence, R. I.

BY LUTHER D. BURLINGAME, Industrial Superintendent.

One of the most notable developments in modern industry is the attention given to the health and comfort of the employees. It has been conclusively demonstrated that activities along these lines, when properly directed, not only reduce accidents and illness, and raise the standard of living, but also give direct results in increased efficiency and production in the work of the factory.

The Brown & Sharpe Manufacturing Company has taken an interest in such work from the inception of the business in 1833, which interest has been increasingly active in recent years. Among the prominent features are the guarding of machinery, instruction in safety methods, and the supervision of the health of the employees, including the installation of a complete dispensary (Fig. 1), with a physician in attendance at stated hours and an experienced male nurse in attendance during all working hours, this service being rendered to employees without charge.

Another line of activity, and one which has been longest established, is the training and instruction of apprentices, these being trained in a number of trades connected with machine work, under the supervision of experienced men. This includes not only ordinary instruction in the shop, but also school training of such character as will be useful in the particular trade being taught.

Primary conditions for healthful employment are good ventilation, proper regulation of temperature, good drinking water, and proper toilet facilities, these matters having been given careful consideration in the designing and maintenance of the factory buildings.

The care of machinery has grown to be more than that required to protect the machines from damage through wear or breakage, it having become of prime importance to guard them so that the workman will be protected. In addition to all that has been done in the past in guarding machines in the Brown & Sharpe factory, a force of men is employed whose duty it is to apply additional guards, not only to new machines being installed, but also in still further improving the guarding of machines in use. The steps taken in this direction have reduced the percentage of accidents resulting from such causes as unguarded gears, belts, projections on revolving parts, and other hazards due to the mechanism of the machines, so that the relative proportion of such accidents is now materially less than in former years. It has been shown that there is need of proper efforts to reduce the number of what are known as nonmechanical accidents, which can in a large

majority of cases be ascribed directly to the carelessness of the workmen, and one of the best efforts in this direction is believed to be to inject the "safety spirit" into the working force. An important means to this end is the organization of safety committees, on which the men will be represented, and where they will be frequently re-

In addition to the ordinary methods of ventilation, special means are provided in departments where noxious fumes or dust occur, in which cases properly constructed exhausts carry away the objectionable matter.

A condition of neatness and orderliness is an important factor in reducing accidents, and one way to bring about such a condition is to paint lines on the floors of the factory indicating where passageways are to be kept clear (Fig. 1).

Wash rooms are provided, with open coat racks, which have steam pipes below to dry the clothing if it is damp. There is provision for an individual stream of water for each workman, the streams coming from the pipe just below the soap rack above each trough. In the foundry wash rooms are shower baths (Fig. 2), and here individual lockers are provided for the clothing.

In addition to the school work connected with the training of apprentices, to which reference has been made, classes are being conducted in English for the training of those foreign-born employees who speak only their native languages, and there are also classes in citizenship, where instruction is given to those who are of alien

birth, so that they may be prepared to become eligible to American citizenship.

The general spirit sought to have prevail in this factory has been to encourage employees to improve themselves rather than to carry out measures that are sometimes called "paternal."



Fig. 1. Brown & Sharpe Manufacturing Company, Providence. Lines on floor to indicate clear passage way.

minded of the need of caution by having safety matters brought to their attention.

One means of reducing accidents of this character is the issuing of a booklet, "Health and Safety," in which accident prevention has been made a prominent feature, and the care of the health of the employees is also carefully considered. A copy of this booklet is given to each employee when he enters the service of the firm, and it has proved popular, not only in this factory, but it has also been in considerable demand from outside factories. Accompanying this book, when given to new employees, is a card reading as follows:

SAFETY FIRST.—The accidents in our shop are largely to new men, and largely on account of carelessness. You are one of these new men, and it is one of your important duties to work safely and avoid accidents. Read "Health and Safety" carefully."

Brown & Sharpe Mfg. Co.

This is followed up personally by a member of the safety committee in the department where the new employee is at work.

Another means of keeping these safety matters before the workmen is by posting bulletins, showing monthly records, giving the relative standing of the departments by a diagram as to the number of accidents. The purpose of these bulletins is to encourage a good-natured rivalry between the different departments in the matter of securing a high standing for safety.



Fig. 2. Brown & Sharpe Manufacturing Company, Providence. Shower baths in foundry wash room, with individual lockers.

The location of the factory near the center of a large and prosperous community, where the facilities of restaurants, boarding-houses, etc., are ample, and where there is an opportunity for choice of living conditions, avoids a problem which is so often an important consideration where factories are situated in isolated locations.

Jones Store Company, Kansas City, Mo.

BY L. M. JONES.

About eight years ago we organized in the store the Mutual Benefit Association, the object of which was to carry out an idea we had cherished for many years—that is, that such an organization founded on the principles of cooperation could do much more for its members collectively than the individual could do singly. The membership of this organization is composed of the employees of the store, and the object is to promote the interests of its members, to extend aid in cases of distress, sickness, or death, and to provide mental training and recreation. All old employees of the store are members of the association, and new employees become members after four weeks' service. When a person ceases to be an employee of the Jones Store Company, that person at once ceases to be a member of the Mutual Benefit Association. The membership is divided into four groups as to the payment of dues as follows:

Group No. 1.—All members earning \$4 and less per week are assessed 15 cents per month. (We have no employees earning as little as that now, but this rate was established when the organization was formed and refers only to that time.)

Group No. 2.—All members earning over \$4 and less than \$7 per week are assessed 25 cents per month.

Group No. 3.—All members earning \$7 and not more than \$10 per week are assessed 40 cents per month.

Group No. 4.—All members earning over \$10 per week are assessed 50 cents per month.

Members are entitled to sick benefits after three months' membership according to the following schedule: group No. 1, \$2 per week; group No. 2, \$3.50 per week; group No. 3, \$5 per week; group No. 4, \$7.50 per week.

Benefits are to be paid for each full week's absence due to sickness or disability. No benefits will be paid for less than one week's absence and not more than six consecutive weeks in twelve months and not more than ten weeks in any one year.

Death benefits are paid as follows: group No. 1, \$50; group No. 2, \$75; group No. 3, \$100; group No. 4, \$150; provided that the member has belonged to the association for one year; if less than one year, the death benefit is prorated according to the length of employment.

This association maintains a well-equipped hospital, with necessary private rooms, beds, cots, and surgical instruments. A medical dispensary is maintained in the hospital, where an average number of twenty-five persons are treated daily. The association and the store share in the expense of providing, free to all members, a physician and trained nurse. All medicine is furnished free of charge by the store. In 1915 the association distributed for assistance more than \$6,000, and more than 7,000 individuals were treated by the medical department.

The annual report shows that 223 sick claims were paid, amounting to \$3,164; and three death claims were paid, amounting to \$450. At the end of the year the association had on hand in cash \$2,300. The store contributed to the association last year about \$1,600, which covered medicine, part of the salaries of nurse and physician, and all the expense of the employees' outing. It also furnishes telephone, laundry, and porter service, and premises for the hospital, library, etc.

The association, through its annual outings, its various entertainments, library, and other activities, has assisted in bringing about a better store spirit, promoting the idea that we are one great family with common interests, that by working along the line of cooperation and real fellow-

ship we accomplish much for our individual selves as well as for the organization.

As an example of the entertainments, we cite the one given in Convention Hall recently, where there was an attendance of more than 5,000 people, on which occasion the members and their friends not only had a splendid time, but realized several hundred dollars for the benefit of the emergency fund.

The annual outing given under the auspices of the association is one of the most delightful events of the year. The store is closed for that day, street cars are chartered, and the employees and their families go out to one of the parks, where a good free dinner, including old-fashioned barbecued meat, is served. After dinner those present enjoy the concessions in the park, or indulge in boating, bathing, dancing, and many kinds of athletic games. Business is entirely forgotten, and the occasion is so enjoyable that it is looked forward to from one year to another.

On the fifth floor of the Twelfth and Main street building, where there is an abundance of room and sunshine, a cafeteria is maintained for the employees. Food is furnished to the employees at cost, and is of the best quality, being the same quality as furnished in our cafe for customers.

A matron is furnished by the store to look after the welfare of the girls, investigating their home surroundings and otherwise assisting them in every way possible. The store also has a rest room for the girls, which is furnished with rocking chairs, couches, library table, and piano. In connection with the rest room is the library containing several hundred volumes. A week's vacation with full pay is given to those who have been in the employ of the store for one year.

The educational work of the store is conducted by the "school of efficiency," which was organized several years ago, and has proved a great success in improving the general efficiency of the store organization. Regular instruction is given in classes for salespeople, cashiers, inspectors, floormen, assistant managers, drivers, and wagon boys; in fact, through the educational department every employee is reached. Once a week we have a session of what is known as the "blunder" class, composed of employees who have made errors during the week.

As mentioned in this article, all these activities tend to promote the idea of team-work and cooperation. The practical results are shown in increased efficiency, a livelier enthusiasm, and a stronger devotion to the interests of the business.

We believe in appealing to and building up the good in our employees, recognizing their inalienable rights as men and women, treating them with that consideration that promotes their self-respect and creates in them a desire and ambition to advance the best interests of the institution with which they are connected. We endeavor to bring about a feeling of mutual interest and unity of purpose between employer and employee. We believe that scolding, fault-finding, and slave-driving methods are rapidly being eliminated in modern business concerns, and that employers who use force instead of reason are out of harmony with the spirit of this age. We believe the employer who takes a personal interest in the welfare of his employees not only brings happiness to them, but his efforts react on himself, enlarging his sympathies and ennobling his character. In this respect there is no better investment for the employer than to distribute good cheer throughout his establishment.

Perhaps such work is at least a partial answer to the

age-old question, "Am I my brother's keeper?" We can state from experience that the work briefly described in this paper has a great influence in improving and stimulating the human factor, and in creating enthusiasm and loyalty in all the activities of our concern. Enthusiasm and true loyalty must, however, be voluntary, as they cannot be purchased with salary.

American Rolling Mills Company, Middletown, Ohio

Welfare work, as understood at the plant of the American Rolling Mills Company, means the conservation of health, life, and limb of the employees, and thereby increasing the happiness of those related to it in any way.



Fig. 1. American Rolling Mills Company, Middletown. Boys' gymnastic class of the Armco Association.

The company believes that the foundation of this work is the home, and it therefore has interested itself in civic movements for better sanitation, better streets, more parks and playgrounds, to the end that better homes may be made. The company owns forty-five houses, the larger number of which are occupied by people who were born in Europe. There is plenty of space around each house for grass, flowers, and garden. One group of houses is so arranged that there is a community bath house for each four. This group is known as Garden City, was built three years ago as an experiment, and has proved very satisfactory. To further encourage the spirit of individual responsibility and appreciation for "the things worth while," cash prizes are given each month for the cleanest houses and each season for the best kept lawns and gardens.

To encourage in its workmen some of the good and healthful hobbies that, to some extent, nearly everyone has, the company has assisted in financing an association to which all employees belong, and which is managed by the employees. It has a general secretary, physical director, stew-

ard, and foreign secretary, and operates the Armco Club and the Armco Foreign Club. In these two club houses or on Armco field, the latter being the property of the company, any employee can develop and satisfy his hobby to the fullest extent, whether it be billiards, cards, gymnastics, basketball, baseball, tennis, or the reading of good books in the quietude of the club library. These features develop initiative, alertness, and thoughtfulness.

Probably no other company has made greater effort to install safety devices, but it believes a careful man with no safeguards is a safer man than a careless workman with all the guards that can be thrown around him. Guards alone will not protect, and therefore the first thought, once a man is inside the plant, is to impress him with his individual responsibility in the safeguarding of his life and the life of his fellow-workmen. This is done by giving special instructions to assistant superintendents, foremen, subforemen, and workmen in general; by joint meeting of the superintendents, central safety committee, and chief surgeon, which meeting is held once a month in the office of the general superintendent, and through articles and notices in the Armco Bulletin. Signs, bulletins, and printed instructions are posted throughout the plants; an annual safety first meeting is held, to which all employees and their families are invited, and assistance is given by the safety and sanitary officers, who are patrolling the plant both day and night.

In order that every employee can have pure water to drink a separate water line reaches every part of the mill. This water comes from seven deep wells, and as a special precaution this water is analyzed regularly. The sanitary closets, wash rooms, and showers that have been installed assist in maintaining the health of the organization.

When a workman is injured, no matter how slight the



Fig. 2. American Rolling Mills Company, Middletown. Billiard room of the Armco Association.

injury may be, he is given first aid in his department, and, if deemed advisable, is sent to the hospital by his foreman or superintendent. The hospital is a brick and concrete building 36 by 44 feet, located on a small hillside near the main entrance of the company's largest plant, the east side works. While this is not a large hospital, it is complete

ployment he is paid at the rate of \$6 per week after the first week, and not to exceed thirty-nine weeks, by the Armco association.

Western Electric Company, Chicago, Ill.

The Western Electric Company, at its Hawthorne works in Chicago, employs approximately 15,000 people—men and women. The company lays particular stress on its sick and death benefit provisions, and its pension funds, and these features of its welfare work are so important that they are given below.

PENSIONS AND BENEFITS

1. PENSIONS.—Retirement on pensions is provided for employees coming under the classes listed below. Employees in Class A may be retired on pension either at their own request or at the discretion of the committee. Employees in Classes B and C may be retired on pension only at the discretion of the committee and with the approval of the president or vice-president.

Class A.—Employees whose age is 60 years or more (female 55 or more) and whose term of employment has been twenty years or more.

Class B.—Employees whose age is 55 to 59 years (females 50 to 54) and whose term of employment has been twenty-five years or more.

Class C.—Employees whose age is less than 55 years (female less than 50) and whose term of employment has been thirty years or more.

Class D (Disability Pension).—Any employee whose term of employment has been fifteen years or more and who becomes totally disabled by reason of sickness may, at the discretion of the committee and with the approval of the president or vice-president, be granted a disability pension, which shall continue for such period only as the committee may decide.

The amount of the annual pension in any of the above cases is 1 percent of the average annual pay for ten years, multiplied by the number of years of the employee's term of employment. Example: an



Fig. 3. American Rolling Mills Company, Middletown. Type of houses in the Garden City colony.

in its equipment, and seven or eight patients can, if necessary, be cared for indefinitely. Its organization and equipment have proved ample to take care of any emergency that has arisen. In addition to the hospital, a fully equipped dressing room is maintained at the central works, where all slight injuries that occur at this plant receive attention.

In every department of all plants are blankets, stretchers, and "red cross" boxes containing bandages and such other emergency supplies as would most likely be needed in that particular department. The medical department is in charge of a chief surgeon, who is assisted by a house surgeon and three nurses, two male and one female.

Both injured and sick employees receive compensation. When injured within the plants, the employee is paid according to the provisions of the Ohio State Workmen's Compensation Act, which in brief is as follows:

"In case of temporary disability, the employee shall receive 66% percent of his average weekly wages so long as disability is total, not to exceed a maximum of \$12 per week, in which event he shall receive compensation equal to his full wages; but in no case to continue for more than six years from the date of the injury or to exceed \$3,750."

For injury resulting in partial disability, permanent total disability, or death, a graduate scale of remuneration is paid by the company under the same act.

In sickness or injury incurred outside of regular em-



Fig. 4. American Rolling Mills Company, Middletown. First aid team.

employee whose term of employment at time of retirement has been thirty years and whose average pay for ten years has been \$1,500 a year will receive an annual pension equal to 30 percent of \$1,500, or \$450, payable in monthly amounts of \$37.50. The minimum pension will be \$20 a month, but this is not to apply to disability pensions granted to employees of less than twenty years' service or to pensions granted to "part time" employees.

2. ACCIDENT DISABILITY BENEFITS.—Total Disability—Full pay thirteen weeks, half pay for remainder of disability. Maximum benefits to be \$20 a week after six years of benefit payments.

Partial Disability—For first thirteen weeks, 100 percent of loss in earning capacity; for remainder of disability, 50 percent of loss in earning capacity. Period of payments not to exceed six years in all.

3. SICKNESS DISABILITY BENEFITS.—These benefits begin on the eighth calendar day absence on account of sickness and are as follows: (a) for employees whose term of employment has been ten years or more—full pay thirteen weeks, half pay thirty-nine weeks; (b) for employees whose term of employment has been five years or more, but less than ten years—full pay thirteen weeks, half pay thirteen weeks; (c) for employees whose term of employment has been two years or more, but less than five years—full pay four weeks, half pay nine weeks. Benefits are not provided in the plan for sickness of employees of less than two years' service. In such cases such practice as the company may establish from time to time will be followed.

4. DEATH BENEFITS.—These are payable only to wife (or husband) or dependent relatives of deceased employee, and are: (a) Sickness death benefits—If employee's term of employment has been ten years or more, one year's pay, not to exceed \$2,000; if employee's term of employment has been five years or more, but less than ten years, six months' pay, not to exceed \$2,000. (b) Accident death benefits—Three years' pay, not to exceed \$5,000, and the necessary expenses of burial, not to exceed \$150.

In addition, the company has a very beautiful hospital in which there are 6 beds, 3 for men and 3 for women, to be used only in emergency, an operating room fitted up with every modern convenience, including a unique and very efficient day and night lighting scheme. It has three first aid dressing rooms for men and three for women, with a central waiting room for each sex, and one large dressing room in the center of this grouping. In another part of this hospital building there are three other examination rooms for each sex, leading off of a central record room. This suite is for the examination of applicants for employment.

There is a very complete x-ray outfit, with latest types of the various machines, and three laboratory rooms—one for the urines and excreta, one for surgical pathological work, and one for bacteriology, which means making and keeping of vaccines, serums, and autogenous vaccines. There are incubators and refrigerators in these rooms, and a peculiarly efficient centrifuge with high revolution power for throwing down such bacteria as tuberculosis, etc.

Every applicant for employment is given a medical examination. It seems this feature of the company's work had to be inaugurated rather carefully and gradually. Up to a short time ago these examinations were held a month or six weeks after the person was employed, the purpose being to determine first whether the person could be made into a good employee and was desirable for a permanent place; this applied largely to the lower class of employees—those who receive \$15 a week or less. But this scheme did not work well; the foremen complained that people were sent to them, and that they took pains and spent time teaching them the business for a month or six weeks, and then they were turned down for some physical defect, which disorganized their departments. An attempt is now made to examine all applicants before they are employed, and it is the purpose to draw this line very closely and to make the medical examination more rigid in the future. Careful records are kept on a card index system of these examinations, one side of the card being devoted to the medical and physical examination and the other to be filled out by the patient, concerning his antecedents, previous employment, nativity, and other statistical data. These cards are rather elaborate; the medical side is dictated by one of four examining physicians employed by the company and set down by a nurse who acts as clerk.

The company's cafeteria and restaurant service is elaborate, the cafeteria room being about 100 by 200 feet, with a two-way service counter. Meals selected more for the

quality and value of the foods than because of their appeal to the appetites, especially of young women, are furnished at cost, and payment is made for the meal by each person as he or she leaves the room. An upstairs dining room has tables and waitresses, and is patronized more largely by officers of the corporation and foremen, who can afford to pay a slightly larger amount for their lunches. There is a large modern kitchen, thoroughly well ventilated, an elaborate dishwashing outfit in another room, and another room is devoted to the preparation of vegetables and fruits; the butcher shop is just off a large refrigeration room cooled by brine coils, in which the meat is kept. There is a complete bakeshop, with modern oven for breads, pastry, and pies.

The company is studying the problem of a periodic examination of all employees, and intends to begin by making the examination optional, beginning with the higher officers and foremen of the corporation, with the intention to gradually extend it to all employees. At the present time the regular monthly examination of employees engaged in those occupations that lead to occupational disease are held, and consist of quite a rigid clinical examination by the dispensary doctors.

Brown & Bigelow, St. Paul, Minn.

BY S. F. HOLMES, Sales Department.

After all is said and done about the system and the labor-saving devices of the factory, there remains the important relation of employer to employee to explain the growth of some factories and the decline of others. It is this relation and the prevailing spirit among the employees themselves that is the subject of this article. The duty of the employer does not stop when he has provided a place to work, work to do, and the regular payment of a certain sum. The employee is more than a means to an end—he is also an end in himself.

By taking a vital interest in the mental, moral, and



Fig. 1. Brown & Bigelow, St. Paul. Anniversary banquet to employees for length of service and punctuality.

physical welfare of his employees, providing material advantages in the way of amusement and benevolent funds, the employer finds that the manpower of the factory is increased, and he is more than repaid in increased production for the health, happiness, and good-will he has made possible for his employees. He finds that by these methods his cost of production has not materially increased, while the output is nearer the maximum in quantity and quality than would have been possible under the impersonal method. This is the policy that is substantially followed by Brown & Bigelow, Inc., of St. Paul. This policy, as carried out by the firm, is very simple in operation. The employees, through their organization, known as the Brown & Bigelow Employees' Club and Benevolent Association, conduct the welfare work. The welfare work is the product of the firm's policy, but the details of the management and operation are directed by

the employees themselves. The activities of the organization are the provision for athletic and recreational features, the management of the lunch room, and the handling of the benefit insurance fund.

The basis for the work of the employees' organization is supplied by Brown & Bigelow. Their model factory building is located out of the down-town district, where fresh air and sunlight permeate every nook and corner. Each department is a healthful and enjoyable place to



Fig. 2. Brown & Bigelow, St. Paul. Bowling teams and alleys.

work, and on the grounds of the factory the firm has provided baseball diamonds, tennis courts, and quoit courts. Here in summer the employees amuse themselves during the noon hour. The girls have a baseball team, which plays with other teams in the city. Games from the various departments also create interest, and aid to centralize the attention of the employees on their work at the plant. When fall comes, a bowling league is organized composed of teams from the various departments. The directors of the firm present a loving cup to the winning team at the close of the season.

One evening every two weeks during the winter months a dance is held in the club rooms, and a dancing teacher instructs those who desire to learn in the latest steps. Once every six weeks the employees have a dance in the St. Paul Armory, to which there is a minimum charge. The employees are given an annual picnic at one of the many parks about the city. Here all get together—managers, office force, the factory hands—and spend the day playing games and enjoying the fresh air. The expenses



Fig. 3. Brown & Bigelow, St. Paul. Free dancing classes during the winter.

of this picnic are paid by the picnic fund, the money derived from forfeitures due to tardiness on the weekly time card.

The second activity of the employees' association is the management of the lunch room. When the factory was built, special provision was made for lunching conveniences, and a large, pleasant room of over 5,000 square feet of floor space was arranged for this purpose on the first floor. The kitchen equipment was supplied by the

firm, and is of the most improved character, but the property of the lunch room was purchased by the employees from their own funds. The purpose of the lunch room is not to make profit, but to give the employees wholesome, well-cooked food at cost. Whenever a profit is made, the surplus is spent in buying silverware, tables and chairs, and in supplying the girls' baseball team with suits. Over 500 eat here daily, and occasionally there are several musical numbers during the meal.

There are two kinds of service—cafeteria and restaurant. Those who choose pass around a counter, cafeteria style, and get a glass of milk, hot coffee, bowl of soup, ice cream, etc., to supplement a lunch from home. Those who wish an entire meal have tables reserved for them at one end of the room, where they are waited on by girls from the factory. The menu consists of soup, three choices of meat, potatoes, choice of three side dishes, bread and butter, tea, coffee or milk, and pie or ice cream. All the food is well cooked and clean, and for this meal only 25 cents is charged. At present this charge pays all expenses and equipment, and occasionally a surplus accrues, which is used for the benefit of the girls' baseball team.

The most important feature of the work of the employees' association is the maintenance of the insurance and benevolent fund. This fund is provided by assessments of the employees, who, according to wages received, are divided into two classes, A and B. Class A employees pay 25 cents per month, and their sick benefit is \$5 per



Fig. 4. Brown & Bigelow, St. Paul. Tennis tournament being held on the employees' club court adjoining the factory.

week and death benefit is \$100. Class B employees pay 15 cents per month, and receive a sick benefit of \$3.00 per week and death benefit of \$50. This rate has been carefully calculated, for during the ten years of its operation the fund has met all claims, and there has been no appreciable surplus.

By means of this organization other benefits have been made possible. Through its agency a Young Women's Christian Association worker comes to the factory every Friday and talks to the girls during the noon hour, giving them help and kindly advice. Another benefit is derived from the mutual interest purpose that actuates the employees, and hence a sense of loyalty to the firm and to each other pervades each department and raises the tone of the surroundings.

Thus, referring to the introduction of this article, Brown & Bigelow regard their employees as a great happy family, and are well pleased with the results. Their cheerful, loyal employees turn out more and better work, which well repays them in increased output for the health, happiness, and good-will they have made possible for their employees.

The Larkin Company, Buffalo, N. Y.

The Larkin Company, soap makers, perfumers, chemists, and importers of food specialties, has two large dormitory buildings in which many of its women employees are housed, and all those who wish to live in the dormitory

can do so. There is a sorority and something of club life, a dormitory restaurant, cozy parlors, a sewing room, with cutting tables and electrically moved machines, where girls can make their own clothes, and there is a well-appointed laundry where the girls can do their own special laundry work and learn how it is done.

by decided action of the company, which refuses to discharge employees who have failed to make their payments, and permits the loan shark to collect only the principal and the legal rate of interest. This has resulted in the practical elimination of the loan shark. There is an excellent restaurant at which employees obtain good food at cost.



Fig. 1. The Larkin Company, Buffalo. Doctor's office in the factory.

The medical staff is headed by a woman physician, a dentist, a trained nurse, and a practical nurse. The company has special arrangements for medical attention in the special branches, and employees are served by these specialists at a reduced fee. The company makes no charge for general medical service. There is an excellent dispensary and dressing room and small emergency operating room in the factory. Dental work is done for employees without expense to them. There is visiting nursing in the homes when it is necessary. There is a benefit association, with dues varying from 20 to 60 cents per month, and, in addition to contributions in this way by the 1,300 employees, the company distributes to its members approximately \$4,000 a year in benefits. Sick benefits run from \$2.50 to \$7.50 per week for thirteen weeks, and death benefits run from \$50 to \$100. There is a school in which commercial branches are taught. There is a bonus plan which provides a 10 percent bonus to employees for excellence in their work. The 1,300 employees of the Larkin Company have savings in the Larkin bank amounting to over \$300,000, on which the company pays 5 percent interest, compounded quarterly. Employees who have saved \$500 may borrow from the company to build or purchase their own homes, and repayment is made on a basis of 10 percent a year. There is a legal department of the company that serves employees, even going into court to help them in their legal troubles. The "loan shark" industry has been virtually discontinued

Marshall Field & Co., Chicago, Ill.

Nine thousand people are employed in the retail store of Marshall Field & Co., Chicago. There is mechanical ventilation in all the lower floors of the establishment, vacuum cleaning everywhere, and every effort is made to preserve a wholesome atmosphere and to prevent disease germs from invading the premises. A physician is employed, whose whole time is taken up with the sanitation and hygiene of the great store. This physician also directs the work in the rest rooms, which are conducted in two parts—one part for employees and one part for patrons—and in the dispensary and hospital maintained in the store. This physician, through his assistants, looks into the home lives of employees, and thus comes to know primary causes of many illnesses to which employees are subject, and efforts

are made through the guardians of the homes to improve the hygiene and sanitation wherever necessary. The company does not maintain a hospital, but does maintain wards in two general hospitals in Chicago for its employees, and bears the same relationship to two sanatoriums for the care of tuberculous patients, though the



Fig. 2. The Larkin Company, Buffalo. Women's rest room.

company claims to have very few of the latter developed.

Every effort is made to keep, more especially, women employees in good health. Dryer rooms are maintained, with steam coils, where the young women may dry their shoes and skirts in wet weather. The company maintains

a cafeteria lunch room for employees, in which more than 3,000 are fed daily, the others bringing their lunches. The average cost of a soup, meat, and dessert, with bread and butter and a beverage, is 11 cents. A substation of the Chicago Public Library is maintained for the use of employees, and more than 6,000 volumes per month are used. A school is maintained for the younger employees, and the boys and girls are given two hours each day in which to study arithmetic, spelling, grammar, and penmanship. These school hours are maintained during the time that the store is open, so that the employees are paid for the time at school. On the completion of the course of study in the school, diplomas are given for completion of courses similar to those in the public grammar schools of the city.

There is a superintendent in this school and educational department, who has taken a very great interest in the welfare of those who come under his surveillance among the men and boys employed, and a woman superintendent occupies a similar position for the women and girls. These two directors are in touch with the home lives of the employees, and make every effort to help them with their domestic, social, and health problems.

There is a choral society of 200 members, who rehearse every Monday evening, and a concert is given each year. All members of the choral society who attend 75 percent of the rehearsals each year are given extra vacations. The serious operas are sung at these annual song festivals. A baseball league is one of the athletic features, there being from four to six teams in the retail store and the same number in the wholesale department, located in another part of the loop district of the city. These teams play for trophies, the principal one of which is called the John G. Shedd Trophy Cup, hung up by Mr. Shedd, president of Marshall Field & Co.

Employees receive two weeks vacation, with full pay, each summer, and half pay when sick, no matter what the length of time is. The men employees are encouraged to join militia companies, and an extra vacation is given each year for encampment purposes to those who join. There is also a fire brigade on each floor in the store, and members obtain extra vacation on account of this service.

The company makes a special point of avoiding the patronage of employees or any suggestion of charity, in order that the employees of the corporation may learn to rely on themselves and to maintain their self-respect and individual freedom.

The Santa Fe Railway System¹

DATA FURNISHED BY MR. E. P. RIPLEY, President.

This company has no so-called welfare department, but is engaged in various branches of welfare work, and I outline below the facts concerning these activities:

HOSPITAL ASSOCIATION.—This association was organized by our employees, and is supported by a small monthly contribution from them, based on the amount of salary earned by each, the amount in no instance being more than \$1 a month. For the sake of convenience, this contribution is deducted by the railway company from the employees' monthly pay checks and turned over to the association. The latter provides free medical and surgical attention by competent physicians, surgeons, and nurses to all employees requiring it. The hospital buildings, thoroughly

modern in construction and equipment, were in nearly every instance erected at the expense of the company and by it donated to the association, because of the company's desire to assist its employees in providing adequate hospital facilities.

READING ROOMS.—A pamphlet entitled "The Santa Fe Reading Room System," by Mr. S. E. Busser, a copy of which is sent herewith, gives a very complete history of and clear insight into the workings of this institution.

PENSIONS.—A pamphlet descriptive of our pension system is also sent herewith. This system became operative January 1, 1907. The provisions of the system are unusually liberal, particular attention being called to the high minimum amount which is paid. The company bears the entire expense of this pension system, the employees making no contribution whatever to its support.

EMPLOYEES' MAGAZINE.—A copy of "The Santa Fe Magazine," which is published monthly, is sent free to each employee for the purpose of creating a broader and more intelligent interest on the part of the employee in their railroad and in each other.

APPRENTICE INSTRUCTION SYSTEM.—A pamphlet describing this feature, issued by our supervisor of apprentices, gives a brief, but complete, outline of this system.

TELEGRAPH SCHOOL.—The company also operates a small telegraph school, with an average daily attendance of fifty students. Instructions in telegraphy and station accounting are given in a five months' course, the completion of which it is assumed will qualify men of the right material for positions as operators.

SAFETY DEPARTMENT.—This department was created about four years ago, with Mr. Isaiah Hale in charge as commissioner of safety, with headquarters at Topeka, Kan. Mr. Hale travels over the line organizing the men and appointing safety committees from the various departments at each point. The work is being pushed actively through personal contact of our officers with the men, by safety lectures and rallies, and by moving pictures and stereopticon lessons given at various points along our lines. A small amount of literature is also distributed.

The company does not conduct cafeterias or lunch rooms for the exclusive benefit of employees, but at the numerous eating houses located at the passenger stations of the company employees are furnished meals at an exceedingly low rate—a rate considerably lower than the actual cost of the food. This is made possible through an arrangement made by the company with Fred. Harvey, by whom these eating houses are conducted. Sanitary and comfortable sleeping accommodations are also provided for employees for a nominal amount at their various lay-over points.

The working conditions and surroundings of our employees are made as agreeable and sanitary as it is possible to make them.

New Jersey Zinc Company, Palmerton, Pa.

The company has its own hospital, a delightful little building, in which there is an adequate dispensary, an outpatient department, and beds for thirty-two patients. The Palmerton Neighborhood house is a large two-story building that answers as a club house for the company's employees, and here school is conducted for employees of foreign birth. Some of the best work the company does is in the homes of its foreign-born employees, and a settlement worker is employed who speaks the foreign languages of those who work for the company, and who helps to improve the living conditions in the homes. She has grown to be a part of the life of the community. The town of

¹It will be seen from the data furnished that the company is deeply concerned for the welfare of its employees. The pamphlets about which President Ripley writes are veritable treatises on their respective phases of welfare work.—EDITOR.

Palmerton has been built by the company in the course of the past fifteen years, and it has many attractive homes, a park, electric lights, modern sewerage system, a bank, the hospital and several churches, besides the schools for English as well as foreign children and for the grown employees of foreign birth. There is a kindergarten, at

the company says it is frequently asked whether the employees appreciate the immense amount of welfare work done for them. The company answers:

"If it is meant, do they come and present their thanks for what is offered to them, we would say, 'very seldom;' but if it is asked, do they take advantage of the opportunities offered, we answer, 'yes.'" The company asks other questions: "How many of the rest of us appreciated what our homes did for us when we were children? How many of us appreciated what the school and college did for us? How many of us now appreciate what is offered to us in public museums, public libraries, and the like?"



Fig. 1. New Jersey Zinc Company, Palmerton, N. J. Palmerton Hospital.

which those women who work and have no one with whom to leave their children can bring the little ones for the day's stay. They are fed and cared for, bathed, and have games and stories, and are taught by the object-lesson method. The neighborhood house was last year patronized by more than 14,000 grown-ups and children. There are a gymnasium, bowling alleys, billiard rooms, a music room, dramatic clubs for the different nationalities, a school for the mechanic arts, where the boys are taught carpentry, the mechanic's trade, and other useful manual arts. There are also cooking classes for boys and girls. The company maintains its own summer camp on Lake Mineola, eighteen miles from Palmerton, and the boys are grouped under the "Cooperative Boys" and the girls under the club name of "The Camp Fire Circles."

Safety devices are used in all parts of the factory, and employees are rewarded for suggestions for improvements, being paid for new devices.

A rather new feature at Palmerton consists of a large number of bungalows as homes for the lower-paid employees, who pay from \$7 to \$7.50 a month rent. All these houses are underdrained and have good sewerage. They consist of four rooms, a toilet, back and front porch, and a garden. In 1914 there were 190 contestants in the garden prize offer. Eighty percent of the gardens were shown by foreign employees, and six percent of the prizes offered were won by foreigners. The management of

comradeship and friendliness between fellow employees and also between officers and employees. This has helped us considerably in bringing our efficiency to a higher standard.

The society has in its employ 1,001 clerks, of which 302 are women. These clerks are divided into classes, each



Fig. 2. New Jersey Zinc Company, Palmerton, N. J. Foreigners' English class in the Palmerton Neighborhood House.

desk working under special classification. There are 112 boys, 264 junior clerks, 300 senior clerks, 203 special clerks, 87 technical and supervisory clerks, and 35 officers, junior officers, and superintendents.

The question of recreation and the promotion of sociability receives continuous consideration, and opportunities for enjoyment through athletic activities, outings, and theatrical entertainments are carried on throughout the year. A committee known as the Sunshine Committee renders aid and conveys sympathy, and endeavors to uplift those who are stricken with illness or misfortune. The society has been active in the organization of various clubs to promote sociability. It has a fife, drum, and bugle corps, consisting of sixty members, a band and a "boosters" club, an Equitable women's club, and a rifle club. Light, air, and ventilation are continually looked after, and regulated as far as possible. The clerks have also established a credit union in order to promote thrift. This union is composed of over 350 members, and is conducted under the banking laws.

In December, 1912, the board of directors put into effect a plan of caring for superannuated or permanently disabled employees and established a reserve force for the

library has been installed for the use of employees. The society also has an insurance library open to employees for reference purposes.

Vacations of twelve working days are allowed employees who have been in the service one year or longer, and additional vacation is granted for service of fifteen years or longer. This vacation is not limited to the summer months, but may be taken any time during the year. Portions of vacations may also be accumulated.

A welfare committee consisting of seven members, three of who are appointed and three elected by the clerks, and one ex-officio member, studies and makes recommendations on all matters having to do with welfare affairs. The employees are expected to support by their conduct and influence the efforts of the officers to secure orderly, economical, and efficient administration.

The company says: "The Equitable is a public service institution, and its spirit should be expressed in cooperation and courtesy. The good-will and friendship of those

who transact business with us are won or lost by the treatment they receive. Cheerful cooperation on the part of each employee, together with businesslike deportment and appearance, is essential to this end. The obligation of the officers and directors to the policyholders is of necessity shared by every employee, and our employees appreciate heartily all our efforts to provide for their physical, mental and moral welfare."

At the convention of Agency Clubs, held at Cape May in September, 1914, the Equitable Veteran Legion was founded. The Legion consists of all loyal representatives of the society in the field and at the home office who have been associated with the Equitable in continuous service, in any capacity, for a period of five years or longer. The Legion is comprised of a series of divisions as follows: associate members (to be called "associates"), who have been in continuous service for five years and any additional period of less

than ten years, and who shall form the five-year corps of the Legion; full members (to be called "members"), of the following nine grades: the ten-, fifteen-, twenty-, twenty-five-, thirty-, thirty-five-, forty-, forty-five-, and fifty-year corps. The Legion has a membership of 2,300.

Illinois Steel Company, Joliet, Ill.

BY H. B. SMITH, Safety Inspector.

With the hope that many lives may be saved and much pain and suffering prevented, the following plan of education was devised and successfully operated:

In April and May, 1913, the Chicago & Joliet Electric Railway Company and the Illinois Steel Company arranged with the heads of the city and parochial schools for a series of talks on safety, with motion pictures and lantern slides. These lectures were given at the Steel Works Club, in a room which seated 400 children, and, in order to take care of the 7,700 school children in Joliet, these talks were repeated each school day for a period of six weeks. Later these lectures were held in the Princess Theater, a motion picture house, which was donated



Fig. 1. Equitable Life Assurance Company, New York. Vice-president Lunger presenting prizes at an outing of the employees.

purpose. It has also provided for free insurance to all clerks who have been in the society's employ for one year or more.

Adequate provision has been made and is effective for employees overtaken by illness or other temporary disability. A short working day is maintained, and employees working overtime when occasion requires are compensated. Employees having perfect records for promptness and regularity during three successive months are granted one day's leave of absence, and employees having perfect records of punctuality and attendance during any twelve consecutive months receive an honor certificate.

A well-equipped dispensary and an infirmary for employees are maintained, with a graduate nurse in charge. A house physician is also continuously in attendance during business hours. There are about 3,600 treatments given each year, and, in addition, a periodical health examination of each employee is made and records thereof maintained. Filtered drinking water and individual cups are supplied. Analytical tests are made from time to time in order to insure purity.

A circulating branch of the New York City Public Li-

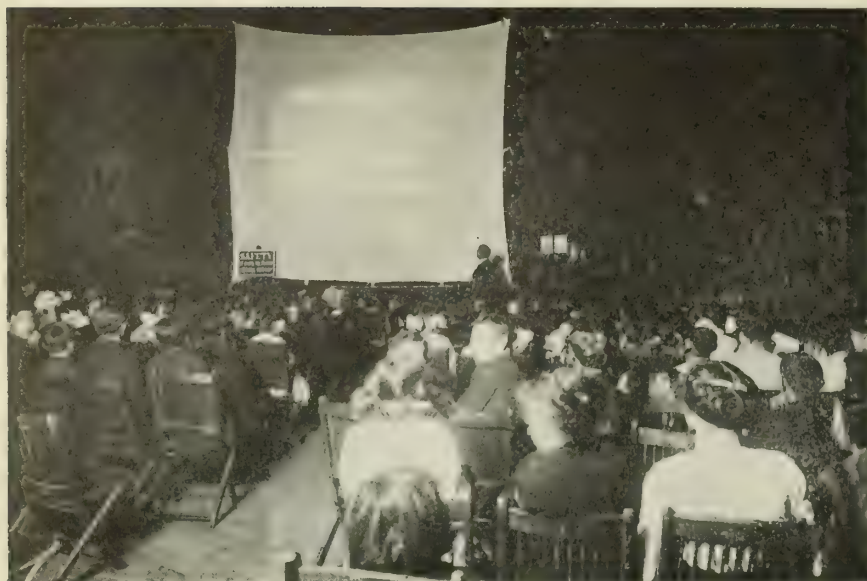


Fig. 1. Illinois Steel Company, Joliet. Children attending an illustrated lecture on "safety first."

by Mr. L. M. Reubens, manager, for this purpose. This theater is the newest and safest in the city, and has a seating capacity of 1,000. These lectures began on April 14 and continued until April 24, being delivered every morning from 10:30 until 11:30, excepting Saturdays and Sundays. In order to complete this work in two weeks, it was necessary to take care of the children in Lockport. Ward's Theater was donated by Mr. Ward for these talks, which were given twice each day for two days, about 550 children attending.

Two motion pictures were used. One was "An American in the Making," which took a young foreigner through the works of the Illinois Steel Company at Gary, exhibiting in detail the care exercised by the company in instructing the new man in regard to the hazards and also showing the protective appliances in place. The subject of the other picture was "The Price of Thoughtlessness," giving many incidents of street car accidents by playing on the streets where there are street car tracks, and also showing the children being instructed in the school room in accident prevention. Each day one of the men from the Illinois Steel Company was taken to the Princess Theater, where he put on one of the Draeger helmets, which the company provides for the men working in gases, ammonia fumes, etc., and the use and manner of using it was explained to the children. About forty slides were used to illustrate the methods employed by the company to interest the men in the "safety first" idea. These pictures illustrated the danger of walking on railroad tracks, and presented statistics of accidents caused by this practice. They also showed how the want of care on the part of persons having charge of motor-driven and horse-driven conveyances resulted in accidents with street cars. Views of the inside and outside of the Steel Works Club were also given.

Many letters were received from the schools thanking the steel company, street car company, and Mr. Reubens for the entertainment. The street car company used from four to eight cars each day to carry the children to and from the lectures, and the total attendance was 8,792.

Shredded Wheat Company, Niagara Falls, N. Y.

The Shredded Wheat Company, of Niagara Falls, has applied nearly all its welfare work in the direction of prevention and prophylaxis. Beginning with a wonderful building operated almost entirely by electricity, and ending with the welfare of employees, everything is directed toward convenience of operation, good hygiene, and sanitation and cleanliness. The company conducts an a la carte restaurant, in which all the women employees are the guests of the company—that is, the midday meal is entirely free to employees. There is a wide choice of foods, but the menu is made up with a view to wholesomeness and nutrition as well as to palatability. There is an auditorium for lectures and dancing parties, rest rooms, and just off these rest rooms



Fig. 1. Shredded Wheat Company, Niagara Falls. Dining room where employees are served meals as the company's guests.



Fig. 2. Shredded Wheat Company, Niagara Falls. Women's sunlit rest room.

is a small hospital and an emergency equipment. There are shower, needle, and tub baths, to which the employees have access at all recreational hours, and, as there are forenoon and afternoon rest periods of fifteen minutes and a longer lunch time, there is ample opportunity for employees to indulge their delight in the baths.

There is a corps of emergency nurses, and this paid corps is augmented materially by volunteers from among the employees of the company, who are given professional instruction in the principles and practice of first aid.

There is a choral society, with a membership of more than one hundred, which holds weekly meetings for rehearsal. The time of these rehearsals is paid for by the company, as it is taken out of the working hours. Profes-

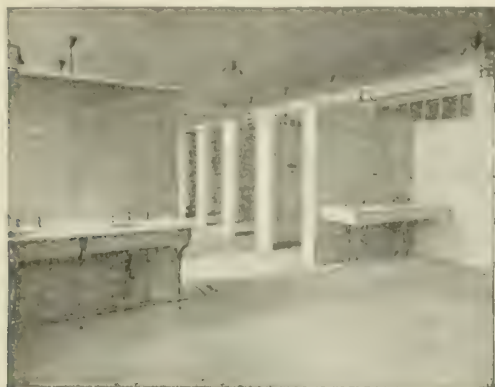


Fig. 3. Shredded Wheat Company, Niagara Falls. One of the marble lavatories.

sional music teachers are employed, also dancing teachers, and there is a band which also employs a professional master, and those of the employees who develop a taste for instrumentation are given an education in that direction.

National Lamp Works, Cleveland, Ohio

The National Lamp Works, a subsidiary corporation of the General Electric Company, has fourteen branches in as many cities. Mr. E. S. Brittin, of the Cleveland branch, has been the guiding spirit in the creation of the welfare activities of the corporation, but, as each branch must stand on its own bottom in regard to its earning capacity, so the superintendent of each branch has the option of accepting or rejecting any of Mr. Brittin's proposals in regard to welfare service. Some branches have put in just what the Cleveland branch has, and some have omitted one or more features. In the Cleveland factory is a social secretary, located in a large room near the employees' entrance of the building, through which employees must all go to their work. Beyond this room are lockers for the women employees, who make up two-thirds of the total number, and after leaving their wraps in their lockers the employees go to their several working stations. A prominent feature of the welfare service is enacted just at this point—the social secretary sees the employees as they enter the building, and it is her duty to observe each one as to whether she seems to be mentally and physically fit for work. She does not communicate with the employees as they pass in, but, if one appears to be ill or unhappy, she is sent for by the social secretary and an inquiry is made as to her trouble. If necessary, the social secretary, or one of her assistants, visits the home and tries to remedy the trouble, and does whatever is necessary to be done to that end. If one of the girls is tardy, nothing is said about it; if she is tardy twice at short intervals, a note is made of it, and, if she is tardy three times, the social secretary makes an inquiry as to the cause. Only recently one of the girls, repeatedly tardy, reluctantly admitted that her mother was ill, and that she, the employee, had gotten breakfast, had prepared the smaller children for school, had done nursing and home care of the sick mother, and had then come to her work. The mother, it was found, was very ill, and the girl had repeatedly been up with her at night. In this case the company took over the nursing of the sick mother and sent help into the home.

A very prominent feature of the National Lamp Works' welfare is its luncheon service, and elaborate figures have been made by Mr. Brittin, published in booklet form, showing the cost of the installation of the cafeteria, service rooms, and the kitchens, including lunches, counters, tables, furniture, trays, dishes, napery, and silverware, based on a unit of 300 employees, 225 of whom are women and 75 men. It was found that 80 percent of all employees use the lunch room, service room, and rest room. The total equipment for these 300 people cost \$4,180.27, and the booklet divides these expenditures into various items in a most illuminating way. There is a dispensary, a hospital unit, dressing room, and complete equipment and accessories. Mr. Brittin has designed what might be called a "knock-down cafeteria counter," which can be set up quickly and conveniently in almost any shaped room in an area of almost any size. The counter is made in sections, and as many sections as are needed can be used, and there are corner connections that can be fitted as desired.

There is a competent dietitian employed by the corporation, whose duty it is to prescribe proper menus and to see that the food is properly prepared and invitingly served. It is this company that has undertaken to direct the food choices of its employees by lowering the price of those articles believed to be most desirable as a midday lunch for young women, and by raising the price on those articles that young women oftentimes most want, but that are not the best for them; as, for instance, 2 cents is the charge for a glass of certified sweet milk, while 6 cents is the handicap placed on a cup of coffee.

The company makes a prominent feature of its first aid work and dispensary service, and maintains an efficient force of nurses and doctors. Lectures and demonstrations of first aid service are given under the direction of Dr. W. A. Haldy, the company's physician and an admirable booklet is published by the company for distribution to employees and to others interested, giving the cause, symptoms, and treatment of the majority of diseases to which working people are liable. This pamphlet contains many illustrations showing how to place various bandages and how to do the various dressings. It also goes into the mysteries of antiseptics, the infection of wounds, poisons and their antidotes, and has a noteworthy chapter on tuberculosis, its causes, its avenues of communication, and its treatment. This booklet also has a chapter on the items and cost of the equipment of the dispensary, dressing and auxiliary rooms, cost of the instruments, medicines, and dressings, and gives illustrations of well-equipped rooms of the sort.

Lowe Brothers Company, Dayton, Ohio

Special attention has been given to provide ample light for all the buildings occupied by the company. The old buildings are made as bright as possible, in addition to the light supplied by the large windows, by painting the inside in white, while the new buildings are of the large window type.

Lockers are supplied for all employees in the factory. Commodious wash rooms are provided, and particular care is taken to protect the men who work in the paintmaking departments. It is the duty of a special janitor to maintain a perfect sanitary condition.

In order to protect employees from possible disease from working in dry lead, they are provided with efficient respirators, and as a result practically no cases of occupational disease have occurred.

A lunch room for the women employees is provided, with tables, clean tablecloths, and all the necessary equipment. Hot coffee or tea is supplied to all employees. The women have a club, the High Standard Club, organized for literary and educational purposes. It is a member of the city, state, and general federations of women's clubs. The meetings are held in the club room on the second and fourth Wednesdays of each month from 12 to 1 o'clock.

The relief association has been in existence for nearly sixteen years, and is conducted entirely by the employees. Membership is voluntary, and nearly all the employees are members. Regular payments are made for sickness. At the organization of the association the company contributed \$100 to the treasury as a foundation. The association now has about 110 members, and has over \$500 in its treasury. No effort is made to accumulate a large amount, and when the treasury has more money than is considered necessary as a reserve, the dues are omitted so that the excess may be reduced. Annual summer outings are provided by the company on one day of each year, in which all employees and their families participate.

It is a rule of the company to pay the highest wages possible for the work done. Six years ago, by the will of the former president, a profit-sharing arrangement was inaugurated, which provided that for ten years the dividends from the president's holdings in the company were to be divided periodically among all employees on a certain basis of division, which has resulted in an addition of an appreciable amount to the income of each employee.

American Blower Company, Detroit, Mich.

This company manufactures heating apparatus, ventilating plants, ice fans, and blowers. It conducts a monthly periodical which it calls "Shop Talks," a newsy little four-page publication, with a little gossip of the factory and its people, and a good deal of valuable material in the shape of short talks on the company's business and methods and efficiency, and employees contribute to this little monthly periodical. The company has its own hospital, dispensary, and out-patient department; it has visiting nursing, inspires thrift in its employees to the extent of a savings system; has sick, disability, and death benefits, and a pension provision. A unique feature of this company's policy is indicated by the following recently promulgated bulletin:

From and after this date promotions to positions of importance in the organization of this company will be given only to those who are native-born or naturalized citizens of the United States, or to those of foreign birth who have relinquished their foreign citizenship, and who have filed with our Government their first papers applying for citizenship, which application for citizenship must be diligently followed to completion.

Employees of foreign birth who retain their foreign citizenship will not be discriminated against in their present positions or work, but they will not be promoted to positions of responsibility and trust.

A prerequisite to employment by this company must be loyalty to our Government and our flag in addition to loyalty to the company itself.

The factory management is authorized to make this order effective immediately.

Michigan Stove Company, Detroit, Mich.

DATA FURNISHED BY MR. H. B. GILLESPIE, Vice-President.

The welfare work that we do is largely the evolution of forty years of continuous stovemaking, during which period we have come in very close personal contact with our employees, and have been enabled to study their requirements and necessities, and to provide, to the extent of our ability, such helps and assistances as are most urgent.

In addition to maintaining a thoroughly modernized and, as far as possible, sanitary plant, with all of the conveniences that we have thought it necessary for our men to have, such as dressing rooms, toilet facilities, shower baths, etc., we subscribe largely to an employees' mutual benefit association, which, for a small weekly contribution, provides members with incomes during periods of incapacity due to sickness, etc. We have found that this mutual benefit association has provided means to help the family of the employee tide over difficult periods when the head of the house was ill, and that the association has, therefore, been a most beneficent one. We also carry under the group plan a life insurance policy for each employee in our works at our own expense. When a man accepts employment with us, he automatically becomes insured under this plan. The policy for unmarried men is \$250 and for married men \$500. We have found in a number of cases where deaths have occurred that the insurance payment was the only money that was available in the family to defray funeral expenses, etc.

Our superintendents do a certain amount of welfare work in the works of which no record is made, but all of which is more or less altruistic and beneficial.

Ludlow Manufacturing Company, Boston, Mass.

This company manufactures jute and linen carpet, yarns, bagging, hemp and twines. It does not conduct its own hospital, but has built and presented an excellent little hospital to the town of Ludlow, and it meets all expenses incident to the care of the people of the town, most of whom are employed by the company. It has a village club house, in which there is an assembly hall, a gymnasium, bowling alleys, swimming pool, reading, card, and smoking rooms, ladies' parlor, six rooms for classes in cooking, sewing, laundry, etc., and rooms for private club meetings. Nearby is the athletic park for outdoor sports, and children's recreation classes. There are two village schools and a large, handsome high school for the children of employees, and the company builds and owns its employees' homes, keeps them in good sanitary and hygienic condition, and rents them to employees at a low rate, running from \$1.80 per week up to \$3.85, this latter for an eight-room, single-family, two-story, well-made frame building, with porches, garden, good sewerage, and all modern conveniences. The company has its benefit association and savings organization and a pension fund.

Cincinnati Milling Company, Cincinnati, Ohio

This company conducts a first aid hospital in the factory, with Dr. Otto P. Geier, chief physician, in constant attendance during the working hours. The company also employs nurses in the plant hospital and dispensary, who do out-patient visiting. While this bare statement seems to imply little, Dr. Geier has made a special study of industrial welfare work, and the quality of the work he is doing cannot be explained under simple headings.

United States Playing Card Company, Cincinnati, Ohio

This company employs approximately 2,000 people, and conducts an excellent restaurant, which seats at one time 1,100. There are rest rooms for the women, with a nurse in charge, a first aid hospital and dispensary, and the nurses employ part of their time in visiting in the homes of sick employees or of those who have sickness in their families.



CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature,
Army Medical Museum and Library, Office of the Surgeon-General,
United States Army.

Hospital Development in Germany from 1888-1913 (Fortschritte des Krankenhauswesens in den Jahren 1888-1913). Dr. Grober. Fortschritte d. Hygiene, hrsg. von S. N. Kreiss, Berlin, 1915.

In the eighties of the last century hospitals were still largely considered charitable institutions. The nurses possessed little professional education, the buildings were insufficient and often overcrowded, and the hygienic conditions left much to be desired.

Among the causes of the great progress in hospital development during the last twenty-five years must first be mentioned the long period of peace which the country enjoyed and the enormous increase of the wealth of the German people. Social insurance, benefiting all classes of the working people, was also an important factor in the advancement of modern hospital conditions. The various great workmen's organizations can spend much larger sums than could possibly be done by individuals. Almost one-half of the hospital patients are members of these financially strong organizations.

Today the people are no longer afraid of the hospitals, as was the case in former times. They are so used to the hospital that the well-to-do families regularly send their sick members, in certain diseases, as scarlatina, typhoid, diphtheria, etc., to the hospital. This great confidence of the people in its hospitals extends to all classes, to rich and poor, and is principally due to the efficiency and splendid results of the modern hospitals. That the remarkable progress of modern medicine had much to do with the great hospital development of our times cannot be denied.

The progress in German hospital conditions shows itself in the great increase of the number of hospitals. In 1877 Prussia had only 888 hospitals, in 1910 she had 2,314. In 1877 the number of beds in the hospitals of Prussia amounted to 37,039, in 1910 it had increased to 160,434. The number of patients treated in hospitals amounted in 1877 to 211,060, in 1910 they numbered 1,304,641.

During the last few years a great number of small hospitals have been established by the smaller towns, but, with the exception of a few of the larger cities, like Berlin, Hamburg, and Vienna, where overcrowding has lately become chronic, patients are better cared for in the hospitals of the large cities than in country hospitals.

During the last quarter of a century great changes have taken place in the care of the insane. The old insane asylums have become real hospitals. The patients are no longer kept as dangerous prisoners behind barred windows, but are treated humanely under an enlightened and trained personnel. This has had a very favorable influence on the course of the disease, and the institutions have gained the confidence of the people.

As great as has been the progress in hospital develop-

ment during the last twenty-five years, further improvement is necessary and new problems remain to be solved. The number of hospitals, general as well as special, must be increased, and a continuous healthy progress in all lines of hospital life must be kept up, for standing still would mean retrogression.

Resuscitation Apparatus. Yandell Henderson, Ph. D. Jour. Am. Med. Assn., 1916, LXVII, No. 1.

The old type of pulmotor is found to furnish a mixture of 28 to 30 percent oxygen, and, as pure air contains 20 percent, the oxygen enrichment is not considerable. The main purpose of the compressed oxygen really is to supply the motive power, while compressed air would be equally effective for this purpose, the author claims, under favorable conditions. A marked improvement is the new pulmotor, model B, and several other types of resuscitation apparatus are discussed, such as the lungmotor, life motor, and vivator. The conclusions reached are:

1. Universal training in the prone pressure manual method of artificial respiration will accomplish more for resuscitation from drowning, electric shock, and asphyxia than is possible by providing any amount of apparatus.

2. Artificial respiration with apparatus is superior to the manual method in that the apparatus is capable of giving a normal volume of pulmonary ventilation, while the manual method is not.

3. Nevertheless the immediate application of a poor method is far more important than the application of a perfect method after a delay of even five minutes. The knowledge that apparatus is available is liable to result in a neglect of immediate manual treatment in order to have the apparatus brought from a distance.

4. Apparatus should be provided only in places in which it will be immediately available.

5. Since all that any apparatus yet invented affords is artificial respiration, with air more or less enriched with oxygen, it should be of a simple type, so as not to produce exaggerated ideas of its efficiency.

6. Oxygen inhalation should be used immediately in gas and smoke cases, but the apparatus employed should be such as will allow the oxygen to reach the patient's lungs in efficient concentration. Such apparatus should go with every artificial respiration device.

7. Investigation of the use of artificial respiration apparatus in asphyxia neonatorum is needed.

Hospitalization of Prisoners of War Needing Climatic Treatment (Hospitalisierung kurbedürftiger Kriegsgefangener). Der Bund, Berne, 1916, May 4.

By the intercession of the American ambassadors in London and Berlin, the hospitalization of sick and wounded prisoners of war in Swiss health resorts has now also been extended the British and German prisoners of war. Swiss army surgeons will visit the prison camps in Germany and England, and select those prisoners who are in need of climatic treatment. At present there are now about 12,000 sick and wounded French and German prisoners of war at the various health resorts of Switzerland.

There is no animosity between these men who once faced each other as enemies on the field of battle. This is shown by an incident that occurred at the Union Depot at Berne, where a French train with German exchange prisoners met a train coming from Germany with French prisoners of war. The former enemies, officers and men, chatted pleasantly together. There was much laughing

and joking. "For us the war is over!" called out a young German in French when the trains parted. "Let us be friends!" was the answer from the French train, and "Au revoir!" came from a hundred voices, with waving of handkerchiefs from the parting trains. Brave men know no hatred; songs of hate are made by those who are at a safe distance from the storm of battle.

Frozen and Dried Eggs. Ed. Am. Food Jour., 1916, XI, No. 5.

The frozen and dried egg industry, declares a new publication of the Department of Agriculture, is a permanent one because it meets a distinct economic need. Many eggs which could not stand long shipments may be preserved as wholesome food by freezing them, out of the shell, or by drying. Some of the results of this study have just been published in a professional paper, Bulletin No. 224, "A Study of the Preparation of Frozen and Dried Eggs in the Producing Section." The eggs commonly used by reputable firms for baking are small or oversized eggs, and dirty, cracked, or shrunken eggs. To the trade these are known as "seconds." They are not to be confused with eggs that are unfit for human use, such as the classes known as black, white, mixed, and sour rots, green whites, eggs with stuck yolks, musty and moldy eggs, blood rings, etc. These should be rejected entirely or else used for tanning purposes only. Eggs with a bad odor should be rejected absolutely. Careful candling before the eggs go to the breaking room is one of the principal points on the importance of which the new bulletin insists. The bulletin also discusses in some detail the measures necessary to secure cleanliness in egg-breaking establishments.

History of the Care of the Insane in Denmark (Sindssygevaesenets udvikling i Danmark). H. Helweg. 8vo. Kobenhavn, 1916.

The first institution for the care of the insane in Denmark was established in 1632 by the city of Copenhagen. This was the beginning of the great St. John's Hospital, which was later removed to Bistrup. During the eighteenth century several smaller cities founded modest establishments for the insane. The first state hospital for the insane was established in 1852, which was the Aarhus Asylum, and owes its existence to the untiring efforts of Dr. Selmers. Among the men who did much for the hospitalization of the insane the author mentions Peter Jensen and Waldemar Steenberg. Jensen was director of Oringe Hospital, which was opened only five years after the Aarhus establishment. He was the first to give the patients greater freedom and to promote colony and family care. Steenberg was at the head of the St. John's Hospital for thirty years—until 1892—and did much for the advancement of this great institution.

Operating Room Illumination. Ed. Jour. State Med. Assn., 1916, IX, No. 5.

The author discourages pure white illumination, and especially glazed surfaces. It is unnecessary to go to the extremes in adopting black sheets, gowns, etc., because of the necessity for increased illumination. There are, however, some of the soft shades of gray which are restful to the eyes, while at the same time giving an appearance of cleanliness and interfering but little with illumination. An operating room with walls, ceiling, and floor in a soft tint of gray, and in the flat or dull finish, so as to avoid reflection, makes an ideal color scheme which does not tire the eyes, and is all that could be desired from an esthetic point

of view. It should be remembered that the question of illumination has much to do with comfort for the eyes of those who are obliged to be in operating rooms for a considerable length of time. Too much illumination is just as bad as too little. Theoretically, it is far better to have less light and have it properly directed and subdued than to be annoyed by the discomforts from undue brilliancy. Brilliancy of illumination does not mean possibilities for better work, but it does mean discomfort for the operator.

Care of Blind Soldiers in Milan (Assistenza ai soldati ciechi in Milano). Rassegna sanitaria, Milano, 1916, XIV, No. 4.

It is one of the peculiarities of this war that a comparatively large number of soldiers are rendered permanently blind from the explosion of projectiles. All the belligerent nations had to make special provisions for the reeducation of these unfortunate men. The Institute for the Blind in Milan has established a special division for blind soldiers. All are first taught to read by the Braille system. Each one is then permitted to select a trade, in which he receives careful instruction. Typewriting, shoemaking, joining, modeling, and massaging are among the trades taught. To furnish the poor men some distraction, the people of the city have sent a great number of canaries, mocking birds, and other song birds to the institution, and each man takes great pride in taking care of one of these little songsters.

Social Service at the Massachusetts General Hospital. Ed. Boston Med. and Surg. Jour., 1916, CLXXIV, No. 22.

The social service department of the Massachusetts General Hospital is concerned largely with the consideration of the question, "What shall be the attitude of the department toward the increased amount of work which it is called on to do?" The number of patients who can be treated properly in a day is limited, and the limit has now been reached. The excessive demand for social service is due partly to the lack of local organizations in smaller cities and towns, but chiefly to general economic conditions. Social workers see their patients as "accumulated evidence of the background from which they come—from the crowded tenements and straining industries, from the crowded streets and oppressing ignorance which surrounds them." The department very wisely decides to maintain the quality of work, and to treat fewer patients well rather than more patients poorly. During the year 1915 the social service department cared for 2,355 new patients and 652 carried over from previous years.

The American Hospital in Munich. Sonntagsbl. d. N. Y. Staats-Ztg., May 21, 1916.

This hospital was established shortly after the beginning of the war by the American colony in Munich, but it is especially due to the untiring efforts of Dr. Sophie Nordhoff-Jung, of Washington, D. C., the superintendent of the institution, that the hospital maintains its high reputation for efficiency and successful management. So great was the confidence placed in the American hospital that, when the first blinded soldiers arrived in Munich, they were turned over to this hospital, as it was thought that the pleasant surroundings prevailing in this institution would be best suited for these patients. The hospital received considerable assistance from the American Red Cross, but it is especially due to the efforts of Mr. Semler, of New York, that the hospital was able to defray its expenses. Mr. Semler, returning to the United States,

formed a committee, of which Mrs. Benjamin Harrison and Mr. Henry A. Garfield, son of the former president, are members. Up to last April over \$50,000 was collected for the institution, and it is hoped that the hospital will be able to continue its splendid humanitarian work.

The Business of a Modern Hospital. Dr. F. Baker. Trained Nurse and Hosp. Rev., New York, 1916, LVI, No. 5.

All the branches of the business of a modern hospital are in close relation to each other, but all are dominated by the element of safety first. Safety of the patient is the paramount and guiding principle. If the business of a hospital does not bring desirable returns, it is usually due to a faulty organization. The organization should be in direct control of the executive, for without it the latter cannot be held responsible for poor results. It should be a governing principle of the management to receive suggestions from any employee, patient, benefactor of the hospital, or from anyone interested in suffering humanity, for such persons are frequently better able to judge about certain needs than the manager himself. Economy means the greatest possible service for the least expenditure of cash, but it would be a great fallacy to make cheapness the guiding principle. The article is accompanied by an ingenious diagram showing the interrelation of the various branches of hospital management.

The Location of Hospitals. Ed. South. Med. Jour., 1916, IX, No. 5.

Very frequently, when it is proposed to erect a sanatorium or hospital in a small city or town, the owners of property near by or adjacent to the locality selected energetically object because of a mistaken idea that it will endanger the health of people living near to the proposed institution. With the possible exception of a smallpox hospital, there is not the slightest danger of any disease being disseminated from a decently managed hospital or sanatorium. The real reason for opposition to the location of a sanatorium or hospital in the residence part of a town is the fear that possible purchasers of real estate may be repelled by its proximity and refuse to buy, thus lowering the money value of such adjoining property. Generally the objections are entirely speculative, and do no honor to the objectors and often discourage worthy projects.

What Constitutes the Ideal Method for the Admission of Mental Patients to State Institutions. Edgar T. Braunlin, M. D. Ohio State Med. Jour., 1915, May 15.

The laws of the states present a chaos, each one of the forty-eight states having its separate code governing the commitment of the insane. It is a known fact that the legal aspect of the insane reflects with marked reliability the status of public care of the insane in any given state. Provision should be made for proper temporary care for insane patients until they can be legally committed to state institutions. Probably the ideal method of detention is in a psychopathic hospital, such as is maintained in several states, the hospitals to be connected along the lines of general hospitals "for the study and treatment of patients and for scientific research." This need cannot be emphasized too strongly if its value were even only to distinguish the border-line cases. Last, but not least, there should be more cooperation between the family physician and the hospital physician, especially as regards the medical certificate. Complete and thorough histories are needed

for scientific research in the correlation of social disorders and mental disorders.

Adequate Institutional Care of the Tubercular. Philip H. Pierson, M. D. California State Jour. of Med., 1916, XIV, No. 5.

The object to be gained is (1) to take care of the cases which are tubercular, and (2) to prevent others from becoming infected. If tuberculosis of today is properly taken care of, prevention of tomorrow will receive its greatest help. Tuberculosis needs institutional care for part of its course if taken early. Adequate institutional care, then, means sufficient beds to care for the cure or arrest of incipient and favorable cases. The economic loss caused by 500 consumptives, according to Locke and Floyd is: first, \$426,039 loss in wages due to complete disability; second, \$73,984 expense to state for care and not including construction and depreciation of institutions. A central examining board through which all sanatorium cases must pass, and to also have charge of patients while in sanatoriums, would result in more intensive treatment and better general results.

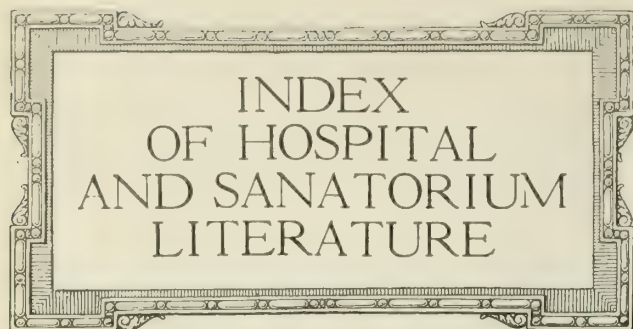
The Institutional Treatment of Consumption. Ed. The Hospital (London), 1916, LX, No. 1560.

In considering the institutional treatment for tuberculosis, it is necessary to differentiate strictly between sanatorium and hospital cases. The former class of patients should include certain amenable types, or, at least, cases where the lesion can be brought to a state of quiescence and likely to be of some duration. The "hospital" cases should be (1) acutely ill cases of apparent recent origin, (2) those that are worth patching up, but that are unlikely to have their disease arrested for any considerable length of time, (3) patients whom it is desirable to teach how to live so as to be in the least degree dangerous to others, and (4) those who can be persuaded, in default of compulsory powers, to submit to segregation for prophylactic reasons and for the benefit of the community, even if only temporary. Segregation of advanced cases is a necessary factor because of the psychical effect of convalescent and moderate cases.

What Is Meant by Hospital Efficiency and Some of the Factors Which Are Often Responsible for Lack of Efficiency. Winford H. Smith. Trained Nurse, 1916, LVII, No. 1.

Efficiency is at present a misused term, and has been abused in the same manner as the overworked word sanitary. Hospital efficiency has been measured in devious ways—i. e., per capita cost, patients treated, operations performed, average length of stay in the hospital, mortality rate, research work accomplished, etc. Any one of these may be a factor in or the result of, but not the measure of, efficiency. The thoroughness and completeness with which work is done should be the gauge of hospital efficiency rather than, or as well as, the ratio of production to energy expended. Organization, first and last, is the most important factor. A trained medical administrator is preferable because of his broader point of view. He should be a director who harmonizes and coordinates, but not a dictator.

Fifty thousand dollars have been collected and an additional \$50,000 subscribed toward a fund of \$400,000 which the directors of the Har Moriah Hospital, New York city, hope to raise for the erection of an entire new plant.



ALBERT ALLEMANN, M. D., Foreign Literature,
Army Medical Museum and Library, Office of the Surgeon-General,
United States Army.

- Aikens, C. A. *Studies in Ethics for Nurses*. 320 pp., 8vo. Philadelphia, Saunders, 1916.
- Archambault, G. *The Laval Military Hospital (Hôpital militaire Laval)*. Union méd. du Canada, 1916, XLV, No. 6.
- Barry, R. N., Sarah C. *Aseptic Nursing of Infectious Diseases*. Am. Jour. of Nursing, 1916, XVI, No. 8.
- Beyer, Henry G. *Etiology of Typhus Fever and Louse Extinction*. Military Surgeon, 1916, XXXVIII, No. 5.
- Bliss, A. A. *Blockley Days—Memories and Impressions of a Resident Physician, 1883-1884*. 94 pp., 8vo. Philadelphia, 1916.
- Bloomfield, R. N., Anna. *Demonstration Room*. Am. Jour. of Nursing, 1916, XVI, No. 8.
- Carey, H. W. *An Introduction to Bacteriology for Nurses*. 151 pp., 8vo. Philadelphia, F. A. Davis Co., 1916.
- Day, H. F. *Bridging a Gap in Out-Patient Service*. Boston Med. and Surg. Jour., 1916, CLXXIV, No. 9.
- Fesevur, H. J. *Training of Nurses in Hospitals (De opleiding van verplegenden in de ziekenhuizen)*. Ziekenhuis, Amsterdam, 1916, VII, No. 5.
- Fisher, Ph. D., Irving L. *The Extension of Human Life*. Scientific American, May 6, 1916, No. 2105.
- Flint, M. D., Joseph Marshall. *The Organization and Problems of a War Hospital*. Military Surgeon, 1916, XXXVIII, No. 5.
- Frostell. *Surgical Automobiles in the Field (Kirurgautobiler i fält)*. Tidskrift i mil. halsövers. Stockholm, 1916, XLI, No. 1.
- Hamilton, M. C., N. G., Edwin A. *Experiences in a German Reserve Hospital*. Military Surgeon, 1916, XXXVIII.
- Helweg, H. *History of the Care of the Insane in Denmark (Sindssygevaesenets udvikling i Danmark)*. 8vo. Kbenhavn, 1916.
- LeRutte, J. L. *A New Departure in the Way of Housing and Nursing the Insane (Een nieuwe richting in de wijze van interneering en verpleging der krankzinnigen)*. Ziekenhuis, Amsterdam, 1916, VII, No. 2.
- Lichtenbelt, J. W. *The Emma Clinic in Utrecht*. Ziekenhuis, Amsterdam, 1916, VII, No. 5.
- Morse, Minnie G. *Practical Talks and Human Nutrition*. Nat. Food Magazine, 1916, XLI, No. 3.
- Neal, J. B. *Diet Lists for Use in the Hospital of the Union Medical College, Tsinan, Shantung*. China Med. Jour., Shanghai, 1916, XXX, No. 1.
- Pagliani, L. *The Hospital Città Francesi in Milan (L'ospedale delle Città francesi in Milano)*. Rivista di ingegner. san., Torino, 1916, XII, No. 6.
- Parker, E. M., and Breckinridge, S. D. *Surgical and Gynecological nursing*. 440 pp., 8vo. Philadelphia, J. B. Lippincott Co., 1916.

- Pennington, M. E., and associates. *Reducing our Waste in Eggs*. Scientific American, May 6, 1916, No. 2105.
- Pierce, Paul. *Protecting the Great Milk Supply of New York City*. Nat. Food Magazine, 1916, XLI, No. 3.
- Stevens, M. D., Rollin H. *A New Timer for Roentgen-therapy*. Am. Jour. of Roentgenology.
- Suchanek, E. *The Austrian Red Cross Hospital in Sofia*. Wien. klin. Wchnschr., 1916, XXIX, No. 9.
- Tamburini, A. *On the Organization of the Psychiatric Service in the War (Sulla organizzazione del servizio psichiatrico in guerra)*. Rassegna sanitaria, Milano, 1916, XIV, No. 1.
- Tropeano, G. *How Should a Modern Foundling Home be Administered? (Come si amministra un brefotrofo moderno?)*. Rassegna sanitaria, Milano, 1916, XIV, No. 5.
- Warnshius, M. D., Frederick C. *The Principles of Surgical Nursing*. Nursing Times, 1916, XII, No. 574.

Miscellaneous

- Architectural Structure of the Polyclinic Hospital to be Erected at Pavia (La struttura architettonica dell' erigendo ospedale policlinico di Pavia)**. Ospedale Maggiore, Milano, 1916, IV, No. 2.
- Assistance for the Blind Soldiers in Milan (Assistenza ai soldati ciechi in Milano)**. Rassegna sanitaria, Milano, 1916, XIV, No. 4.
- Australian Base Hospitals**. Austral. Nurses' Journ., Sydney, 1916, XIV, No. 1.
- Care of Sick Soldiers (Verpleging van zieke militairen)**. Nosokomos, Amsterdam, 1916, XVI, No. 12.
- Hospital Architecture and Construction**. Ed. The Hospital, 1916, LX, No. 1560.
- Hospital Assistance in Florence (L'assistenza ospedaliera a Firenze)**. Rassegna sanitaria, 1916, XIV, No. 6.
- Hospitalization at Leysin of Indigent Citizens of Vaud Suffering from Surgical Tuberculosis (L'hospitalisation a Leysin de Vaudois indigents atteints de tuberculoses chirurgicales)**. Bulletin démograph. et san. suisse, Berne, 1916, No. 11.
- How to Run a Laundry**. Ed. The Hospital, 1916, LX, No. 1560.
- Laying of Corner Stone of New Hunan-Yale Hospital**. W. H. Welch. China Med. Jour., Shanghai, 1916, XXX, No. 1.
- Occupations and Amusements for Convalescent Children**. Ed. Nursing Times, 1916, XII, No. 574.
- People's Sanatorium Umberto I at Prasomaso (Il sanatorio popolare Umberto I di Prasomaso)**. Ospedale Maggiore, Milano, 1916, IV, No. 1.
- State Examinations of Nurses in Dutch East India (Staats-examan voor de verpleegsters in Ned.-Indie)**. Nosokomos, Amsterdam, 1916, XVI, No. 6.
- The New French Hospital in Milan (Il nuovo ospedale francese a Milano)**. Rassegna sanitaria, Milano, 1916, XIV, No. 2.
- The Nurses' Association and State Interference in the Care of the Sick (Die Bond en staatsinmenging in de ziekenverpleging)**. Nosokomos, Amsterdam, 1916, XVI, No. 21.
- The Organization of the Military Hospitals in England (L'organizzazione degli ospedali militari in Inghilterra)**. Rivista di ingegner. san., Torino, 1916, XII, No. 5.
- The Woman's Hospital and Infant's Home, Detroit, Mich.** Ed. Woman's Med. Jour., 1916, XXVI, No. 5.

Miss Mae Simms, superintendent of the Williams Hospital, Lebanon, Ind., is spending a vacation in California.

DEPARTMENT OF NURSING

Conducted by MISS ANNIE W. GOODRICH,
Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

The New Patriotism

Militarist or pacifist, whichever we may be, on one thing we shall be agreed today—namely, that physical fitness is a prerequisite for efficient citizenship, through whatever avenue the citizen may render his service. Furthermore, to the citizens of a democracy, or indeed to any intelligent person, the system no longer commends itself that concentrates its health efforts on a selected group whose ultimate end is to be sacrificed in the full bloom of a physically perfected manhood on the altar of the country, and neglects the great industrial army on which the country's prosperity, even its life, depends in times of peace and not less in times of war.

It is not strange, therefore, to find growing up side by side with the medical and nursing corps of the United States Army the corps of a nation-wide and now generally nation-supported health movement, whose increasingly comprehensive scope of work would indicate that its ultimate purpose was to provide through all possible means that every citizen should render to the country the most efficient service, extending over the greatest number of years, and with that joy of life and labor that is the priceless treasure of the physically fit. The economic soundness of this health movement, amply proved by the result of its various activities—milk stations, school medical inspection, social service departments in dispensaries and hospitals, etc.—has aroused the interest and enlisted the cooperation of many industrial corporations, and every year sees an increasing number of physicians and nurses installed in industrial plants.

To those sitting in the watch towers of the nursing profession the ever-increasing demands for nurses in the industrial field—themselves the working body in the new industry of health making—seem to bring closer and closer the realization of their most cherished dreams—the day when each child projected into the universe finds himself the citizen of a true democracy, a state whose paternalism is committed to the fullest protection and the development to its highest capacity of every human life, regardless of social and financial status; where the privileged class is the mentally and physically handicapped, and where the aristocracy is formed from the laborers who have rendered the most conspicuous public service.

Again, the watchers are concerned to note that not yet does the number of nurse teachers needed begin to meet the demand; not yet does any appreciable number of schools give an adequate preparation for this field; that as sanitarians, hygienists, and workers equipped to cope with the psychological and sociological aspects of its problems, the products of training schools are conspicu-

ously weak when they should be conspicuously strong. An aseptic conscience may be a prerequisite for a nurse, but not an aseptic mind.

The heavy hand of tradition still holds us in its clutches; we are still looking backward. Today in our greatest city an epidemic is demanding in the neighborhood of twenty potential industrial workers' lives daily, and is crippling, possibly for life, those of its victims that escape death. It is said that about 150 nurses and many physicians are needed. Over 200 nurses are waiting, pledged for from six months to two years, for a service that may be required of them through a possible war, or, more possible, epidemics likely to arise from a protracted residence on the Mexican border while awaiting the war. The inconsistent mountains have yet to be leveled, but those most keen to observe this, finding no way to encompass it, still obediently climb. Let us hope that the twenty-first volume of the march of civilization will record that the next generation caused some of its ranges to be removed.

ANNE W. GOODRICH,
Teachers' College, Columbia University.

What a Nurse Should Contribute to Team-Work¹

BY ADELAIDE MARY WALSH, R. N.,

Director of the Social Service Department, Children's Memorial Hospital, Chicago; President of the Illinois State Board of Nurse Examiners.

Perhaps in intelligently considering this all-important subject of team-work it might be advisable to apply the magic word "cooperation," which fixes it definitely in our minds as a working basis for the problem. This is, after all, a simple and practical addition to an established condition. It means the coordination of every interest that points for results, and the ability to accomplish the greatest amount of good by being most effectively and efficiently employed; it means less loss of energy and more easily obtained results; it means a better knowledge of each one's sphere of activity, but it does not mean the losing of one's own identity. In other words, cooperation means to work together, and emphatically demonstrates the proper interpretation of practical team-work.

We might consider primarily what the nurse should be—a woman with a satisfactory idea of the practical element which enters into the profession of nursing; a woman with at least the educational equipment of one year of high school or its equivalent; a woman of good moral stamina, with standards so fixed in the practical development of her character that no ordinary temptation will break through this bulwark; a woman of suitable age, which is generally conceded to range between 20 and 30 years; a woman of tact and patience, sympathy and understanding; a woman whose desire to enter the nursing profession is not based on sentimentality, but who is able to withstand the distractions of life to such an extent that they will not interfere in the routine of her daily professional existence.

A woman who has pledged herself to spend two or three years of her life within the walls of an institution, learning work which will carry her far beyond these four walls, must have an earnestness and singleness of purpose which will conduct her far on the road of being of service to other people. She must never forget that what she does will reflect credit or bring criticism on the school which she represents; she will learn during the process of her education many phases of the human heart; she will have stood on the heights and will have descended to the depths,

¹Read at the meeting of the Catholic Hospital Association, Milwaukee, June 7-9, 1916.

but her experience will have meant much, not only in the development of her own character, but in making her helpful, useful, and the world better for her having been a part of it. A woman who has tried to see with the eyes of a patient who needs sympathy of viewpoint, a woman who has struggled very, very hard to understand the pain of the person she is trying to serve, surely such a woman must have been given a generosity of soul and an insight into other hearts which should make her well able to see just the weak places where her discipline of thought and her powers of observation could make her a valuable adviser and friend.

What is this woman when she enters the hospital, and what is she *not*? A woman and a nurse! What a wealth of gifts and importance of material are here! The asset of being a woman and thereby being able to give oneself with unstinted enthusiasm to the profession one has chosen! Of course every woman should not assume the responsibility of believing that she will be a good nurse. There is a great danger in supposing that training alone is all that is necessary to make one satisfactory in the performance of her professional duties. This training but directs one's natural powers in channels of other opportunities. As some one has said in relation to this subject, "the certificate will tell of the training, but a sick child will tell the rest." In brief, one who adopts this wonderful profession of vast possibilities for saving human life and of the alleviation of human suffering should be possessed of natural qualities to be able to understand and appreciate *people who are patients*. Individuals who are handicapped by the nervous strain of enduring physical pain, harassed by the thousands of cares which are magnified out of all proper proportion in their relation to life—these sick people will press their pangs on this kindly woman with a force that needs bring to the surface all of one's determination, discrimination, tact, and sympathy. That these same women must be possessed of natural kindness and an eagerness for service is a part of the character which should present her for a share in the blessings connected with the profession of nursing.

Some one once asked George Eliot what was the greatest lesson life had taught her, and her response was contained in one word, "tolerance." So the woman who spends certain years of her life trying to read and understand her patients might well allow that quality to hold an important place in the process of the development of her character. Women of integrity, women who possess their souls in peace, who allow the spiritual phase of their natures to be responsive to the influence of their work—such are the types of women we hope, expect, and need to see espousing this noble calling.

Frequently a nervous, earnest, well-meaning woman is plunged into a whirl of activity far removed from the general world in which she has had her experience. She is filled with enthusiasm, and anxious to do the best she can; she is sincere, and should be obedient; she is willing to a degree that on occasions seems unwise, for this great enthusiasm must be endured for a period of three years, and this high tension cannot and should not be maintained for that length of time.

One practical application for good team-work is the suggestion that a nurse should not grumble. When she is on an especially congenial service, if her patient is peculiarly dependent upon her, if she is deeply interested in perfecting the work of her ward, floor, diet kitchen, or dressing room, and when the order is received to report for duty in another part of the institution—this is a genuine hardship to a woman who is entirely wrapped up

in the work that each day and service develops. Occasionally she may justly feel that she has brought it to such a stage of efficiency that she believes her presence is almost needed to carry out her well-considered plans. If she will adjust her mind to the fact that she has done her part in bringing this work to a certain stage of excellency and will allow another student to finish her plans, and will go without a murmur to her next field of endeavor, she will have contributed a genuine piece of good, proficient team-work. On the other hand, she owes it to herself, her service, and her profession to pay as much attention to the detail of her every-day work as she possibly can give heed. If supplies are returned from the sterilizer, if the laundry is brought up at the last moment, if there are countless personal inconveniences present, they can be calmly and carefully taken care of with an equanimity of bearing and a poise of manner which will inspire confidence in subordinates and render much assistance to an institution which trains its students to consider the welfare and the comfort of sick people at all times. It is also necessary to bear in mind that the most intelligent woman is very often the one who is most inclined to adhere absolutely to the rules and regulations of her school. Promptness in reporting, courtesy to her superiors, kindness in instructing those beneath her, appreciation for instructions of the medical and surgical staff, should be observed. There is one more significant place where a nurse can maintain a situation and reduce the danger of poor cooperation to the minimum, and that is if she decides and adheres to her resolution of never being critical, either in her mind, in her attitude, or in her conversation. It is so very easy to decide what other people can do, and at times seemingly an impossibility to attend strictly to what seems to be one's own affairs. If a woman will remember that she cannot do a better service than by preserving peace, she will have indicated her caliber as a broad-gauge, highly trained professional woman. In a concise term, good team-work as contributed by a nurse really means correct attention to the ethical situation. If she will study this side of her professional life and carry out its requirements, she will find that, as far as she is concerned, she will have done her duty. This is not always an easy task, for the reason that individuality is hard to curb, and there do seem to be moments when institutions neglect to consider this all-important phase of people's development. Truly it seems possible to pay strict attention to the spirit as well as the letter of the laws as given in different institutions, and there is no woman in any training school who need fear that her cause and her right, and her ability to serve, will be challenged by high-minded correct individuals who have the responsibility for the proper, just, humane, intensive, and constructive development of the nurse as a student in the training school, who struggles to demonstrate her personal belief in and practice of good team-work. She is not a machine; she is not a person without human understanding; she is not capable of performing tasks and expending herself on duties to the detriment of her physical well-being for any length of time. This does not indicate that the well-trained student nurse is not more than willing to put her shoulder to the wheel at any price and in any emergency where her services are required.

What the nurse should do. She should have a wholesome and beneficial respect for all rules and regulations; she should appreciate in an intelligent way that routine, practically applied, is a support and not for a single instant a thing toward which her feelings should be antagonistic; she should care for her patients to the best

of her ability; she should follow instructions laid down by the director of her training school, and should be most careful that her work is her first thought at all times and under all conditions; she should remember that it is the patient first, last, and all the time. Her attitude to her fellow-nurses should be one of comradeship, friendship, and kindness, with ability to disregard the personal element which so often handicaps people who are doing any sort of institutional work. It should be the principle for which she is striving and not the individual that she serves. She should consider that, whether she likes her senior on the floor or in the ward, or whether she enjoys the supervision of her head nurse, or whether she has any special pleasure in having a certain group of interns on the service to which she is assigned for duty, or whether she is especially interested in the medical or surgical staff member who is responsible for the patients for whom she is caring, is immaterial. This does not in any way suggest that her mental attitude should be cold or mechanical, or not deeply and intensely centered in the work that she is performing, but it does very forcibly interpret the fact that she must remember at all times that her mission is to serve, and in the most comprehensive, devoted manner, and with the utmost skill that it is within her power to render. Her personal impressions should not be given too much consideration. She is there as a student in the great laboratory of human ills, and it is her business, and her best endeavor should be to conserve the health and well-being of the patients for whom she cares. A woman's sensitiveness of soul is so inclined to become involved in the fine points of her intuitive feelings that very often it takes a superhuman amount of courage and strength of will to place the work that she is doing outside of the boundaries of these peculiar limitations. Because an individual is a nurse means that she is a woman first plus this profession. She must for this very reason be very particular to keep all of this side of her nature subservient to the broader basis on which she is building her life.

In what type of institution does this above described woman find herself? Within the four walls of a hospital, where occasionally—we are happy to say, not frequently—she is obliged to work laboriously and nervously and mentally for from twelve to fourteen hours a day. Her living quarters are wretched; often she is obliged to share sleeping quarters with individuals who are, to qualify in the kindest way, "uncongenial." Her life lacks the privacy which is so much needed as a form of relaxation. Sometimes even the food that is served this enthusiastic, ambitious woman is of poor quality and is not well prepared. Nothing is done to contribute to her pleasure, and the last thing in the minds of the people in authority seems to be that this person who is caring for the sick within the walls of their institution needs pleasure, needs recreation, needs diversion. Frankly, there have been times and occasions when this profession of nursing has been put but one step removed from the occupation of being a mere drudge. The nurse has frequently been exploited as an individual who will do for the hospital the work for which servants should have been hired. Her opinion is never sought, and she is not in a position to volunteer very much information. She is receiving a minimum compensation for a maximum amount of labor. There are occasions when a woman in this type of institution becomes utterly and absolutely discouraged, and with good reason. She seems to feel that there is no redress; that she must continue this crucifying work to the end of the time allotted for the requirement of becoming a graduate

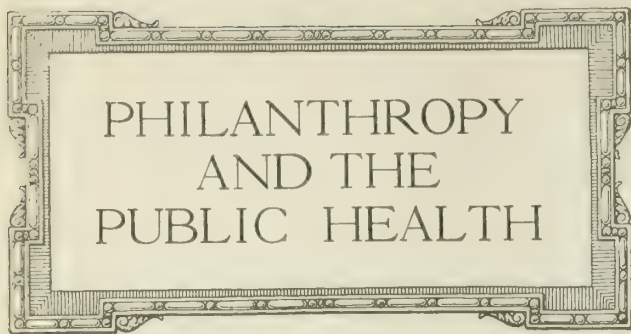
nurse. At the expiration of three years spent within an institution where the training has resembled that which has been described, her joy, her inspiration, her stimulus have faded and gone—alas! sometimes never to be found again! Within this type of institution her hours for study are almost nil. She attends lectures in the evening, taking notes with cramped fingers and aching head, tries to study while attending to the needs of a sick patient, and is not allowed the joy of contributing her part to even the mental activity of this work. She leaves this school poorly equipped, not at all ready for the professional opportunities which await every enterprising and enthusiastic woman, and, because of the low standard of her training school, unable even to register in the state in which the school is situated. Because this same hospital was a small institution, she has not had sufficient experience in the variety of diseases. She has had either too much special duty or too little. It was a surgical hospital, and she had only rare experience with medical or children's work, or, on the other hand, it might have been an institution which gave special attention to the obstetrical work, and for this reason she did not have experience in other lines of professional training.

Now, this seems a very black picture, and it is, we are happy to say, only on rare occasions that the profession of nursing is regarded in so undignified a light, but, still, it is a warning, and we believe that such types of institutions still exist. How interesting it is to contrast this with the training schools in the community where there is nothing thought too good for the nurses who are receiving their professional training under its guidance. The students have the best advantages that it is within the powers of the training school authorities to secure. Frequently they graduate as students of the university with which the hospital is affiliated. Comfortable and practically luxurious quarters are provided. There is a joy of home surroundings and the protection of proper supervision; there is sunlight for the heart and body, and there is every effort made to give these women every physical, mental, and moral advantage that can be obtained.

Take a woman of proper type, place her within an institution that is consciously doing its best, and what must she do to contribute to the proper team-work which will mean the satisfactory conduct of the hospital as surrounding the unit of the patient? She must conserve her judgment, she must be careful, she must be faithful, she must be loyal, she must appreciate that she stands for much that is noble. Her banner must be carried high, and by bearing this aloft she will find that this will inspire her to greater deeds. Loyalty to her school, faithfulness to the physicians, devotion to her patients, should be her watchwords, and as she pursues a life of usefulness and of helpfulness she will be spurred to noble action.

This will point the way toward a normal, reasonable, judicious, conscientious effort on her part to feel that there is no point of contact where she has not been of service rather than a menace to the peace and serenity which should prevail and must be present when each individual in her department of the institution offers with great earnestness her share in the great scheme of proper team-work.

In the building of the \$1,500,000 Illinois State Colony for Epileptics at Dixon, great care is being exercised to protect the patients from their own infirmities. One of the precautions being taken in this direction is the installation of metal guards for hot radiators, steam pipes, etc., to prevent burns. When completed, the colony will accommodate 1,500 patients.



Conducted by THE NEW YORK ASSOCIATION FOR IMPROVING THE CONDITION OF THE POOR.

BAILEY B. BURRITT, General Director.

WILLIAM H. MATTHEWS, Director,
Department of Family Welfare.

DONALD B. ARMSTRONG, M. D., Director,
Department of Social Welfare.

Please address items of news and inquiries regarding Philanthropy and the Public Health to the New York Association for Improving the Condition of the Poor, 105 East Twenty-second street, New York City.

Welfare Work—The Working Out of a New Idea in Industry

BY BAILEY B. BURRITT,

General Director New York Association for Improving the Condition of the Poor.

The increasing emphasis placed on the value of a good physique among employees has been a most significant development in the industrial field during the past few years. This trend has been observed with much interest by the social worker interested in new developments affecting community welfare.

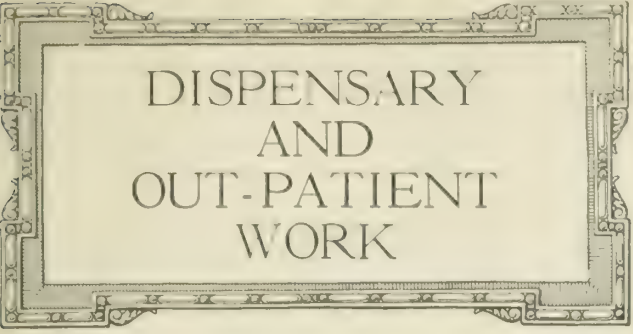
This movement centering about "welfare work" on the part of both large and small employers represents a distinctly new note in the industrial field. We had been accustomed for years to painstaking care on the part of an employing corporation to see that its machinery and physical plant were well kept up; it was the first concern of any industrial plant to see that its machinery was not allowed to deteriorate. The human organism—the worker—received relatively little attention. The supply was large; it was always easy to replace a worn-out human physique which had been allowed to deteriorate by another human organism which could for a time take its place. The theory back of such practice, although it was usually unconscious, was that it was the business of the individual worker to look after his own health and his own welfare, and that it was not a responsibility which rested on the employer. Now, however, the large employer of labor realizes to an extent probably never known before the value of health and good physique as an asset in his business plant. This idea of health and physique has spread very rapidly until we find nearly all progressive industrial organizations directing considerable attention to this problem. The working out of this idea expresses itself in practice either in a well-recognized and well-organized department of welfare work, or at least in an increasing emphasis on and interest in the health and welfare of employees. In this the employer is accepting, whether consciously or not, the social obligations and responsibility implied in his position as a large employer of labor. He is recognizing that the health and physique of the employee is not entirely in the control of the employee; that there are factors entering into the very nature of the work which he is employed to do and of the physical conditions under which he is required to do this work which control to a large degree his health and physique. It does

not indicate that there is any lessening of the emphasis on the individual's responsibility for his own health and physique, but that, in addition to whatever responsibility rests on the individual, there is also an added responsibility resting on the employer. The complete acceptance of this dual responsibility of the individual and of the employer who controls for so many hours of the day the acts and habits of the employee is already meaning much in the improvement of the health and physique of our American communities, and one need hardly add that whatever increases the average health of the employee increases, not only the comfort and happiness of the community, but likewise increases its productive capacity and its wealth.

There is, from one point of view, a very selfish motive for welfare work on the part of employers—namely, the increasing of the efficiency of the workingman in his business. But, on the other hand, when this is completely analyzed, it seems to be to a large extent identical with the altruistic motive of the improvement of the general health, happiness, comfort, and wealth of the community. In so far as employers grasp this broad point of view of welfare work as laying the foundation at once for improving the health and happiness of the individual, increasing the efficiency and profits of the business, and adding to the general health and happiness of society, welfare work is producing the best results, for all these interests are one, and it is the employer who has the breadth of view to grasp this fact that gets the most out of his welfare work for himself, for his workmen, and for the community, and illustrates by his acts the philosophic truth that selfishness and altruism are tied up in one bundle.

Failure to grasp this conception in its full breadth leads to a type of welfare work which is less successful; indeed, a critical examination of the value of the welfare work of any given organization can best be made by determining how nearly it meets this broad point of view. Some organizations have made the mistake of thinking that the provision of a well-lighted and well-ventilated physical plant and generally good physical condition for work, together with the added features of some provision for recreation, for medical examination, and for suitable inexpensive meals prepared under sanitary conditions, are substitutes for needed increases in wages. Wherever this point of view is consciously or unconsciously a potent factor in welfare work, there welfare work is not meeting its greatest possibilities. The broadminded employer realizes that these are necessary additions to satisfactory wages and not substitutes therefor. Adequate wages are, after all, the greatest guarantee of health and good physique. Reasonable hours of labor are perhaps second in importance in guaranteeing these. If to these two conditions can be added the other things which have been mentioned, together with the sympathetic attitude toward the employee which is usually implied in welfare work, and which is always present in any successful welfare work, then we approach an ideal for this work which in the long run gives the greatest benefit to the employer and at the same time is of the greatest benefit to the employee.

Many employers have learned to their discomfort that welfare work superimposed on employees in a patronizing manner does not yield satisfactory results. It must be spontaneous, it must be wholehearted, and it must, above all, encourage the independence of the employee. There must be opportunity for a large degree of initiative—it must be democratic. If one examines the most successful industrial welfare work in this country, these factors will be found present. Its rapid development has already meant much in terms of life, health, and efficiency.



DISPENSARY AND OUT-PATIENT WORK

Conducted by MICHAEL M. DAVIS, Jr.,
Director of the Boston Dispensary.

Please address items of news and inquiries regarding Dispensary and Out-Patient Work to the editor of this department, 25 Bennett street, Boston, Mass.

The Dispensary—A Paying Investment for Industry

BY MICHAEL M. DAVIS, JR., *Director of the Boston Dispensary.*

The time was when the employer knew all the men in his shop, many by their first names, and when all the workers had personal touch with the employer. If sickness, accident, or other ill befell one of the workers, friendly personal relationships provided help when help was needed.

The conditions which prevailed during the first half of the nineteenth century in the United States have given way to very different ones at the opening of the twentieth century. Important industrial establishments no longer number their workers by the dozen, but by the thousand. Accidents, sickness, and other misfortunes become problems of masses, and are no longer thought of as the individual troubles of John Jones or Mary Smith, in which John and Mary need a helping hand. Consequently these problems have to be reached by organized efforts, and, of these, industrial welfare work is one phase.

The changes just referred to are reflected in the medical field. A large part of the care of sickness has passed out of the hands of the individual physician into hospitals, dispensaries, and public health departments. The hospital and dispensary represent organized medical service, as the physician giving treatment in the patient's home or in his own office represents the traditional private practice of the individual medical man. In proportion as the number of workers in an industry is large, both employer and employee are likely to find that economy and efficiency are promoted by organized efforts for the care of health. This implies the organization of medical service, and substantially the hospital as the organization for the care of bed patients and the dispensary as the organization for the ambulatory cases.

The physician needs to have the facilities for diagnosis which modern medical science has devised, which increases his efficiency many times, and these in most instances can be afforded only by pooling equipment, as in the hospital and dispensary. Individual private offices can rarely afford such facilities, and this is fairly obvious in the case of surgical operations, major and minor. It is becoming more and more evident in the case of medical diseases; hence, a growing number of industrial establishments have undertaken to care for the health of their employees by the organization of efficient hospitals and dispensaries.

Although much of the work of the dispensary seems less dramatic than the major operations, which constitute a large part of present industrial hospital work, the dispensary is really the more far-reaching institution of the two. It affects larger numbers than the hospital; it deals

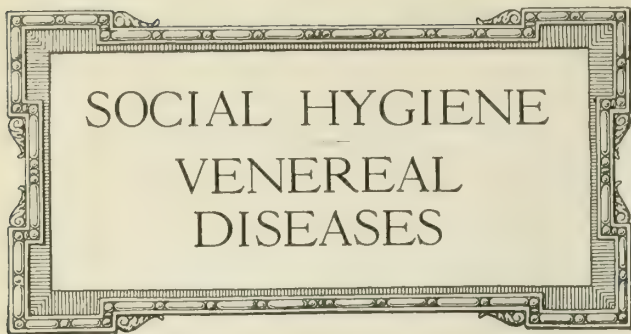
especially with prevention; it can catch disease in its early stages; it can cure minor illnesses before they reach the stage that brings serious incapacity for work or that lowers working efficiency to a point which makes the work of little profit to the employer and of no happiness to the worker himself. As health work in industry develops, we may look forward to the organization of more and more industrial dispensaries, with salaried medical staffs and businesslike, efficient organization. Such dispensaries will be developed because, even leaving aside humanitarian considerations (if that were possible), it pays to keep people well and to cure illness as promptly as possible.

Progressive industrial establishments are really pioneering the way in establishing adequate dispensary or hospital service for their employees, and more and more will do so. But the ultimate form of health work and industry cannot rest on the initiative of the employer alone, nor can it be confined to the large industries which alone can afford to maintain hospitals or dispensaries of their own. Practically all the European nations have established systems for the care of sickness among working people, based on insurance principles. Employer and employee each bear a share of the financial burden, and in many countries the state also contributes a small proportion in order to emphasize the important interest which the public has in the prevention of disease and to assist in the administrative work of the sickness insurance system.

We have seen within the last five years a movement for workmen's compensation laws sweep over the country. No less than thirty-three states have passed such laws during this period, placing the care of industrial accidents under an organized system instead of leaving them to the old individualism. During the next five years, as signs already appearing indicate, we are likely to have a similar movement for the care of sickness. While there are enormous benefits to be derived from the prompt cure of illness after it arises, the financial and the human benefits of increased preventive work are still greater. To some extent in the field of cure, and to a greater extent in the field of prevention, the dispensary can and should play a large part. Every well-organized effort for the health of the employee in an establishment is desirable in itself, and is also a step in the direction of a more and more comprehensive system for the care of the health of the workers.

Miss Mabel Fletcher has accepted an appointment as superintendent of the Hudson City Hospital, Hudson, N. Y. Miss Fletcher is a graduate of Smith College and of St. Luke's Hospital, New York city, and has completed a course in hospital management at the Teachers' College of Columbia University. For a time Miss Fletcher was night supervisor at Mount Sinai Hospital, New York, and later superintendent of a hospital in New Haven, Conn. More recently she has been located at Wellesley, Mass.

Miss Beatrice Murdoch, an instructor in the nurses' training school of St. Luke's Hospital, St. Louis, formerly connected with the Protestant Deaconess Hospital, Indianapolis, Ind., and later with St. Luke's Hospital, Duluth, Minn., will leave this country shortly for Shanghai, China, from which point she will be assigned to one of the Methodist mission hospitals in the interior of China, probably at Chengtu or Chungking. Miss Murdoch's chief duty in her new field will be the supervision of the dietary in the hospital to which she is assigned, a work for which she is understood to be well prepared. Although both Chengtu and Chungking are large cities and located not more than 700 to 800 miles from Shanghai, Miss Murdoch's trip from the latter city to either of them will require about forty days' traveling, owing in part to the fact that the rivers cannot be used at this time of the year.



Conducted by WILLIAM F. SNOW, M. D.,

General Secretary, The American Social Hygiene Association.

Please address items of news and inquiries regarding Social Hygiene to the editor of this department, 105 West Fortieth street, New York City.

Industrial Welfare Work and Social Hygiene BY AMERICAN SOCIAL HYGIENE ASSOCIATION.

The social hygiene movement is, naturally enough, better understood as it grows and gains force, but even yet the question comes up again and again, What is social hygiene? What are its purposes and its methods? A few years ago its purposes were formulated by Dr. Eliot as "to acquire and diffuse knowledge of the established principles and practices, and of any new methods which promote, or give assurance of promoting, social health; to advocate the highest standards of private and public morality; to suppress commercialized vice; to organize the defense of the community by every available means—educational, sanitary, or legislative—against the diseases of vice."

This statement drew together the several lines of attack which had been followed for many years by those who realized the menace to our institutions which lies in the evils with which social hygiene seeks to cope. It included, in essence, the educational, medical, legal, social, and moral attacks on the social hygiene problem which have gained so much support in public opinion during the past few years; but it still left social hygiene as a large and generalized group of activities rather than as a specific program. A more recent statement shows some of the implications of these activities by defining social hygiene as "essentially a constructive movement for the promotion of all those conditions of living, environment, and personal conduct which will best protect the family as an institution and secure a rational sex life for the individuals of each generation."

Certain specific principles and policies have become generally accepted as essential in any program of social hygiene endeavor. On the legal side, it is recognized that attempts to regulate prostitution have never succeeded, the policy of segregation is discredited and abandoned, and the strict enforcement of repressive laws is looked to as the immediate weapon of attack. Among such laws the injunction and abatement law, now in force in twenty-six states, is the most effective measure yet devised for the repression of prostitution. Medically, venereal diseases have become recognized as one of the great public health problems, both as to extent and especially as to results on individual, family, and community interests. There are now definite plans, not only for providing diagnosis, advice, and treatment for existing cases, and for protection against infection, but for measures looking toward the reduction and ultimate eradication of these infections.

The primary concern of social hygiene educational effort is to teach the individual to understand the facts of

sex and reproduction as they are presented to him by his environment, or by his own physical and mental experiences, and to make such knowledge an effective guide for his thoughts and acts in such relations. This involves not only the physiology and anatomy and something of the psychology of sex, but also the laws of heredity, or what is popularly called "eugenics," the fact of venereal diseases, and such related knowledge as every mature person should have. The problem is to present effectively this body of information as it is needed by the individual as he grows from infancy to maturity, so that at each stage he may have only that information which he needs in dealing with his experiences, and yet may have it before he encounters any particular problem.

Social hygiene thus relates itself broadly and vitally to home and community life. Its functions as a protector of community, family, and home bring it close to industrial welfare work, especially if such work hopes to do more than minister to the immediate interests of the organizations which institute and conduct it, and in the broadest sense seeks to promote the general welfare of their employees, even beyond the range of mere industrial efficiency. It would be shortsighted indeed to overlook the close connection of general welfare with general efficiency, or to deny the specific importance of education for sex life in any plan for forwarding the well-being of the individuals of any group, industrial or otherwise.

Welfare departments, as a rule, have to deal with the problems of late adolescence and of adult life, and thus do not meet the vexed questions of sex instruction for childhood and early adolescence; but they have the task of attempting something effective for boys and girls, men and women, many of whom lack any foundation in early training for a rational sex life, and in whom a defense must be built up against ideas and habits acquired in ignorance and fostered by popular misconceptions of the truth about venereal disease, the so-called sexual necessity, standards of morality, and the like. To this defense must be rallied not only the forces of knowledge through the instruction of individuals and selected groups, but the moral forces that transmute knowledge into wisdom and give effect to its guidance.

The Composite Appeal

BY REV. GEORGE R. DODSON, St. Louis

The social hygiene movement is, in certain fundamental respects, new. It is an attempt to do what has never been done in the history of the world. Those who began it had a high purpose, but in the nature of the case could see but a little way before them. The experience of the last few years has brought home to them in a vivid way the immense scope and complexity of the enterprise they have in hand. The further they advance, the more clearly they see that their work is education, education, and ever more education. Nothing can change wrong ways of living and abolish the resultant misery and disease except changed ideas, and especially a revolution in those ideas tintured with passion which we call ideals, and which go deep enough to affect the levels where conduct springs.

The real difficulties we have to face are, if the expression may be pardoned, not so formidable as some that are unreal—that is to say, the movement is retarded by certain almost inevitable popular misunderstanding. It is announced that the social hygiene societies are endeavoring to combat venereal disease, and that to this end they give lectures designed to reveal to the public the vast amount of suffering and the waste of life due to infections which are spread abroad through society by the

social evil. Without further inquiry, many minds hastily generalize from this fact, and assume that the motives appealed to by our propaganda are solely prudential. Others, without any justification in fact, leap to the conclusion that children of immature years and clean lives are to be deluged with information concerning the pathology of sex and so frightened into virtue.

This is absurd, of course, but such phantoms are very real obstacles to a great undertaking such as ours. It is therefore essential to teach patiently and persistently until the public is made to understand that the subject has many sides, and that the nature of a lecture on social hygiene is in every case determined by the character of the group that is to receive it. The social hygiene leaders have no message for such an abstraction as Man. They understand perfectly that what is real is boys and girls of

introduce a poison into their tissues that would destroy all hope of the finest happiness and the widest life.

For those who are already living wrong, and therefore thinking and feeling wrong, a very different treatment is necessary. It is well for the physician to tell them in the plainest way what they are doing—to illustrate, by diagrams and stereopticon pictures of the lesions caused by venereal disease, the folly of their course. Brieux's play, "Damaged Goods," is not too strong or realistic for this class. The fear of the Lord may be only the beginning of wisdom, while the highest love of the true, the morally beautiful and good cast it out—still it is the beginning. In the proper place and time it is a legitimate motive to be used by those who are seeking to control and direct the greatest of all passions.

The fact is that the whole gamut of human motives



Fig. 1. Sex education begun in falsehood and continued through disease to tragedy.

different ages, their fathers and mothers and teachers, young men of clean life and young men who are sowing wild oats, and mature men and women, some of them with sound knowledge and right ideals concerning human relations and others not so well equipped.

We urge parents to instruct their little children, to forestall the impure sources of misinformation, to cultivate in their little ones, by gradual and tactful instruction, an appreciation of the place of sex in life, and to create and maintain the highest moral standards in fundamental human relations. The teachers of untainted youth need to appeal chiefly to their native loyalties and chivalry, to lay the stress on the ethical and religious motives, and to make clear and explicit their own native love of the best. It is not necessary to dwell on the pathological aspects of the subject as if they were regarded as in great danger. It is enough for them to glance over the edge of the abyss and be made to realize that a single so-called lark may



Fig. 2. Sex education founded on truth and leading to normal sex life.

must be used, but the stress, wherever possible, laid on the highest. In this work of spiritual engineering this is as wise as it is congenial to our feelings, for experience shows that the highest motives have the greatest inhibiting and controlling power. Eugenic discussions, for instance, are a mighty aid. They create a profound appreciation of the dignity and importance of sex. Young people can easily be led to realize that they have a great part to play in keeping the world alive and growing; that, as they are descended from the broad-shouldered men and deep-chested women, from the victors in every age of the long past, so they may reasonably look forward to being the parents of strong sons and fair daughters, who will prove efficient and capable in their day and generation.

The appeal of the social hygiene movement is therefore composite. All motives from the lowest prudential to the highest religious and moral are to be employed in this movement.



Conducted by ALBERT WARREN FERRIS, A.M., M.D.,
Saratoga Springs, New York.

Please address items of news and inquiries regarding The Modern Sanatorium to the editor of this department, Saratoga Springs, New York.

The Sanatorium a Tutor in the Art of Living for All Workers

The patient who enters a sanatorium for treatment (leaving out of consideration entirely the tubercular) suffers either from improper modes and habits of living, or from disorders and conditions incident to his occupation. The latter class of sufferers is by far the more numerous, if we properly include among industrial workers those who industriously perform their task behind the desk of the accountant, in the private office of the banker, in the studio of the musician, in the private consulting room or public clinic rooms of the physician, as well as those who are embraced in the category of artisans, mechanics, factory workers, and shop employees.

The patients are pallid, nerveless, and languid; or florid, anxious, and sleepless; or depressed; or short of breath; or emaciated; or complaining of loss of concentration, or of constant or fugitive pains; or detail some other chief complaint which is to them of enough moment to cause them to seek relief from present discomforts, and to take account of possible reduction of future efficiency.

Some of these patients have been working too many hours a day. Some have been exposed to the hazard of dust, or of smoke, or of poisonous fumes. Some have plodded on, striving against the odds of unhygienic environment and habits of life. Some—a large majority—are paying the penalty of improper eating, and are suffering from the direful results of food poisoning. The sanatorium takes up a study of all the health problems in modern industry, and covers a broad field.

Improper diet and ignorance or neglect of colon hygiene are factors in the production of a vast percentage of all sanatorium patients of every class and in every station in life. Hence the sanatorium undertakes very early the important duty of teaching correct diet. It shows how sufficient nutrition can be secured from a proper daily total of the calories of "a well-balanced ration" suited to the individual. It indicates the dangers of the animal proteids in a vast majority of sedentary workers, and points out the proper substitutes. It sets forth the dangers and the deleterious results of stimulants, including tea, coffee, all alcoholics and tobacco. It teaches that digestive processes are retarded by spices and condiments. It demonstrates the disturbance caused by certain uncooked acid fruits, or by the consumption of candies (especially chocolates) at frequent intervals.

Systematic employment for exercise of the odds and ends of time of even the busiest sedentary worker results in improved nutrition and digestion, and indeed is absolutely essential to the improvement of the heart-arterial

cases. The routine life at a sanatorium makes easier the continuance at home of salutary attention to heretofore stagnant groups of muscles and inactive skin in the individual whose circulatory apparatus is at fault.

Regulation of rest is taught by the sanatorium. The joys of a feeling of adequacy and vigor on arising in the early morning, when once experienced by the patient, will rarely be exchanged for the excitement of pleasures or mild dissipation during the hours of the night which properly belong to the realm of Morpheus.

No one thinks of a sanatorium without mentally picturing a bath room, and this is a gloriously true concept. The bath habit, formed or at least systematized in the sanatorium, is "a joy forever," as well as a potent aid to recovery of a measure of health. The special water treatments of an establishment are impracticable in the home; but there are simple measures which should and can be followed daily—even if one has no tub, but only a basin and a couple of towels—to the certain stimulation in a rational way of nerve action and to a daily contribution to red blood vigor.

Finally, the sanatorium fulfills the very important mission of preaching against drugging and of teaching more efficient methods. Drugs should not be spared when the physician decides they are needed, but the slavish dodging of symptoms or obscuring of preventable causes by the use of soothing and comforting drugs cannot be too emphatically condemned. Patent medicines and popular drugs are responsible for a vast amount of reduced efficiency and capacity, if not of actual invalidism.

ALBERT WARREN FERRIS.

Aftermath of the Ohio Convention¹

Dr. A. C. Bachmeyer,
Superintendent Cincinnati General Hospital,
Cincinnati, Ohio.

Dear Doctor: The writer having been called to Boston, this is the first opportunity I have had to address you, and as an exhibitor at the Ohio State Hospital Association convention I wish to thank you, on behalf of the Hockaday Company, for the kind consideration shown me by your committee while at this convention.

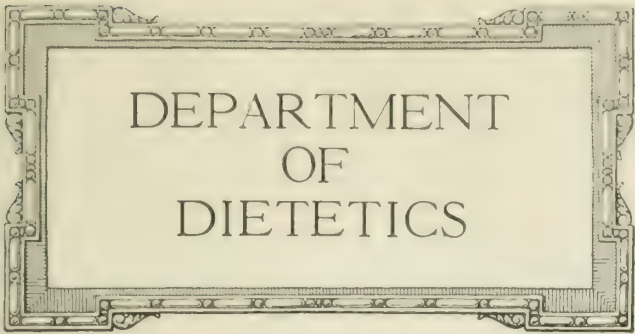
The writer has spent the better part of his life traveling throughout every part of the United States, but I am very emphatic in my statement when I say that the Ohio State Hospital Association convention, held in Cincinnati, was the most successful convention I have ever attended, both from the standpoint of attendance and interest. This is the first hospital convention I have ever seen where the Catholic sisters took the floor and joined in the voting. This opens a great channel of thought as a connecting link between the American Hospital Association and the Catholic institutions of America. This would make one of the most powerful associations in America, and to all who are interested in the management of hospitals this should afford food for much thought.

You are certainly to be congratulated on the way this meeting was managed, and I wish you could give me the formula of your method of getting such a fine representation together. From a financial standpoint, as an exhibitor, will say the Hockaday Company and myself were highly pleased with the results we obtained through this convention.

G. A. BEEM,

The Hockaday Company, 111 West Monroe street, Chicago.

¹The Editor asked Dr. Bachmeyer and Mr. Beem to be permitted to publish this letter, as it seemed to contain some thoughts that should have publicity.



DEPARTMENT OF DIETETICS

Conducted by MISS LULU GRAVES.
Dietitian of Lakeside Hospital, Cleveland, Ohio.

Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, Ohio.

The Dietitian at Work in the Modern Industrial Plant

BY ANNA M. DuGUAY, Dietitian National Lamp Works, Cleveland, Ohio.

I doubt if it has occurred to many of our big business men that the management of a dining room for their employees can be efficiently handled by a woman, especially if she has had a scientific training in dietetics. She should be a woman of refinement and culture, one who can command the respect of both the management and the employees. She should also have a business training and an ever-present sense of tact and courtesy.

Most employees' dining rooms are managed by men who, with all due respect for their other qualifications, have little or no conception of food values. A step in advance of this policy was taken by the management of the National Lamp Works some three years ago, when they opened and placed under the supervision of a trained dietitian a dining room for their employees at Nela Park, Cleveland, where it is aimed to serve daily a plain, well-balanced menu. Specifically, this menu consists of a soup, meat, meat substitute, potato, one other vegetable, pudding, ice cream, two kinds of pie (not because pie is a factor in a well-balanced meal, but because it is demanded), tea, coffee, milk, buttermilk, fresh fruits in season, apples, oranges, and cooked fruits every day. A salad is served daily from early spring until late fall. Choice is offered of white, brown, and bran bread, and also various assortments of rolls. Cake, cookies, and the like are served frequently, all pastries being made in the plant's own kitchen.

The dining service at this particular institution is really threefold. First and foremost, there is the cafeteria (operating under what is sometimes referred to as the serve-self plan). Second, there is a private dining room, with waiter service, patronized mainly by the managers, but open also to other employees of the company and their guests, the cost being slightly higher than the counter service. Third, the department is called on frequently during the summer months, and occasionally at other times, to serve banquets for different organizations holding their conventions in Cleveland. Banquets are also served from time to time on the camp grounds at Nela Park in connection with industrial outings and other outdoor affairs. Sometimes as many as 500 people are served on these occasions.

Coming back to the cafeteria-plan dining room, it is on the first floor of the main laboratory building, centrally located. There are two two-way counters, one in each half of the long room, making it possible to serve 200 people

in about six minutes' time. The daily attendance at the noonday meal averages about 450. The cafeteria counters are constructed of sheet steel, enameled white, with glass tray spaces, copper and german silver being used for certain interior and upper portions. These counters clear the floor by about six inches, making them easily kept clean and sanitary. The tables were made to order from a selected grade of yellow poplar, stained, shellacked, and varnished. They can be folded very easily, making it possible to pile them away and clear the dining room for lectures, dances, etc., on short notice. Each table is 32 by 36 inches and seats six people. The chairs are of bent wood, chosen on account of its durability and lightness. The private dining room, already mentioned, has a seating capacity of fifty.

The kitchen is large, light, and airy, with pastry, vegetable, and meat rooms, and it connects with a large dishwashing room. All tables and receptacles, such as bins, drawers, and the like, are made of white enameled sheet steel. The floors are of red tile.

The plan under which this dining service is managed may be of interest. A special appropriation is made for its maintenance at the beginning of each year. All book-keeping, purchasing of supplies and furnishings, paying of bills, banking, etc., are done through the dining room office, and all overhead expense connected with it, such as rent, office work, and management, are charged to this department, and it thus operates practically as a business in itself. A daily record is kept of supplies used from the store room and of cash taken in. At the end of the month the books are closed, showing the loss or gain for that month. At the end of the year a complete inventory is taken of store room stocks on hand in order to get an accurate check of the books. When the inventory was taken at the close of the year 1915, the stock room book showed a difference of only \$1.78, which speaks well for the accuracy of this simple method of dining room accounting.

The managing of the dining room service carries with it the very interesting work of teaching cooking to the girls employed in the different factories of the National Lamp Works. When one finds these girls, after working an eight-hour day, eagerly waiting for the weekly cooking class which keeps them from one to one and a half hours longer, it can readily be appreciated how anxious they are to learn something of the proper methods of cooking and of home management. The girls seem to take a keen interest in every subject discussed, and in almost every instance they have carried out in their own homes the simple and sensible principles of household management that have been taught them, often to the great delight, not to say wonderment, of their families.

In conclusion, let me say that the woman who possesses a dietetic and business training, combined with good common sense and a fair knowledge of human nature, has a wonderful opportunity for the performance of worthwhile service in the present industrial field. Most of our large factories employ many girls who were obliged to go out to work very early in life, without benefit of the training which can be gained from schools, not through any fault of their own, but because circumstances demanded that they help maintain a home for younger brothers and sisters. These girls, most of them, will be mothers of a coming generation. Can anyone imagine a more important feature of service work among employees than that of teaching these young girls the art of home making?

Wheat Flour

BY G. L. TELLER, M. S., Chicago, Ill.
[Continued from the July issue.]

In the article in the July issue it was pointed out that the color of flour is dependent on two factors—on the amount of natural yellow coloring matter present in the wheat and on the grade of the flour, which grade is determined by methods of selection and combinations of different flours produced during the process of milling. As has been pointed out, the natural yellow of the flour is caused by the presence of the same coloring matter as is found in carrots, where, because of its greater concentration, it is of more pronounced shade.

It has long been recognized among those who have had to deal with flours that they improve materially as to color with age, but the cause of this change was not so clearly understood until certain commercial processes were introduced into the mill by which this yellow color was greatly reduced or wholly removed during the process of milling. This process is what has become generally known as flour bleaching, and has been widely practiced and extensively discussed throughout the country during the past twenty years. This process consists essentially of the passing through the freshly milled flour a current of air containing a small quantity of certain gases which have the property of combining with the yellow coloring matter to produce a colorless compound. Gases which have been extensively used for this purpose are oxides of nitrogen, nitrosyl chloride, and chlorine. Oxides of nitrogen, when introduced into the flour, leave there a minute quantity of material which has the property of giving to certain chemical reagents a pronounced color. The well-known Griess reagent, which is extensively used for detecting the presence of nitrites in water, has been commonly used to show the presence of these compounds in flour. Nitrates in water have a bearing on the wholesomeness of water for drinking purposes, because their presence under certain conditions indicates the presence of certain kinds of bacteria, for it was long ago discovered that many unwholesome waters contained greater or less quantities of nitrites. In this case the nitrites are not objected to because of any probable unwholesomeness of them, but because of the indication of unwholesomeness of the water from other causes. Even here it is necessary to differentiate between nitrites which have been developed in the water and those which have been taken up by the water because of exposure to the air, for it is well known that water, when it has been exposed to the ordinary air of the kitchen for a few hours, accumulates enough oxides of nitrogen from the air to give a pronounced color with the Griess reagent.

The presence of oxides of nitrogen in bleached flours has led to objections to such flour on the ground of the presence of a deleterious substance. The amount of such color developed from ordinary bleached flours is such as to indicate only a very small amount of oxides of nitrogen, the average amount in well-bleached flours being equivalent to about one part per million of the flour. Some writers have reported experiments which appeared to show that these minute quantities of nitrite reacting material were injurious to digestion, holding that they checked the digestion of starch in the mouth by the ptyalin of the saliva and in the stomach and intestines by retarding the action of pepsin and pancreatin. In view of these facts, the writer, in conjunction with Dr. J. A. Wesener, has made a large number of experiments bearing on this question, and has found, first, that when flour containing nitrites is made into a dough containing yeast, the

nitrites are quickly removed by the yeast, so that their presence is no longer apparent; that when flour containing nitrites is baked into bread, the nitrites, all or nearly all, disappear, and, where any remain, the amount present is much less than would be accumulated in a slice of bread exposed to the open air of the kitchen over night. We have found also that nitrites in flour can be made to disappear by heating, as in the process of baking.

A large number of experiments on the influence of nitrites in digestion have been made. The results of these experiments have been incorporated in a paper which was published in the *Journal of Industrial and Engineering Chemistry* in 1911, of which copies can be obtained on request. Following are some of the conclusions arrived at in these experiments:

Sodium nitrite does not interfere with the digestion of starch when present to the extent of one part in one thousand. Peptic digestion is not inhibited by small quantities of nitrous and nitric acids, and the hydrochloric acid necessary for the digestion of proteids by pepsin may be wholly replaced by an equivalent quantity of these acids. Pancreatic digestion is not inhibited by the presence of relatively large quantities of nitrites, nor is its action restrained on proteids which have been previously subjected to appreciable quantities of nitrous and nitric acids.

Further than this, there is no proof that flours as commercially bleached contain either mineral nitrites or nitrous or nitric acids. The bleaching gases unite directly with the coloring matter itself, and, as pointed out in the article referred to above, Vaughan has shown that the substance which gives a nitrite reacting nitrogen is a nitroso body, and is not poisonous nor does it have any action on the blood.

Another point of contention in bleached flour has been that the removal of the coloring matter enables millers to defraud the people by substituting an inferior flour for a better grade. The writer has personally examined a great many thousand flours which have been bleached by different commercial processes and which have not been bleached, and has found that it is not more difficult to distinguish between the different grades of flours when they are bleached than when they are not bleached. Flour which has been bleached produces a whiter loaf of bread than will be produced when it has not been bleached. For this reason many prefer a loaf of bread made from a lower grade of flour which has been bleached than bread made from a higher grade of flour which has not been bleached.

Dr. E. L. White, of Lewiston, Idaho, has recently opened a new 30-bed hospital in that city. The building is a modern one of two stories and basement, embodying many of the newest ideas in hospital construction. An innovation is the raising of windows to the ceiling to bring the window base on a level with the patients' cots, which are 30 inches from the floor. Metal appliances are placed on all of the windows to keep out dust. Hard maple flooring is used, except in the operating room, bath rooms, and lavatories, the floors of which are of tile, with porcelain wainscoting. Built-in conveniences are a feature of the kitchen. The equipment includes indirect lighting, telephones in all rooms, silent signals, one electric elevator for general use and one for food service from the kitchen to the floors above. The cost of construction and mechanical equipment is said to have been about \$25,000.

The new municipal hospital at Lancaster, O., erected at a cost of \$40,000, was opened July 1, with Miss Lillian Allen in charge. Miss Lina Enders, a graduate of the Cincinnati General Hospital, is assistant superintendent, and Miss Anna J. Hawk, who received her training at the Willard Hospital, Chicago, is night supervisor.

NEW INSTRUMENTS AND EQUIPMENT

VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor.

Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

Food Carriages at Sea View and Greenpoint Hospitals

BY WILLIAM G. LUSH,

Department of Public Charities, City of New York.

At certain institutions of the Department of Charities it was decided to experiment with the carriage system of serving food, as it was thought that a material saving both in the food itself and in labor could be made, as well as affording a greater degree of satisfaction to the patients and ease work on the wards. Dr. Edward S. McSweeney, superintendent of the Sea View Hospital, worked up the designs



New food carriage.

for the first carriages, and the author collaborated with him in altering this first scheme to the one described in this article.

The principal considerations were to have a carriage which would stand very rough usage even when handled by patient help, and also one that would keep the food hot during a reasonable period of time and contribute to the ease of serving. These trucks are built up on a steel frame constructed of angles welded by the oxyacetylene process, as experience has shown that riveting is not sufficient. This framework rides on 6-inch casters with rubber tires, and has a cross-bar handle at each end near the top to facilitate handling. The framework has two shelves of Russian iron, the upper one of which is inclosed for carrying dishes. The sides of this inclosure move outward and upward on ratchet supporting bars, thus forming a counter from which food may be served when the truck is in use. The height of these shelves is an ordinary

counter height, but can vary according to the judgment of those ordering the trucks. It might be desirable in a hospital in a locality where the average height of nurses was unusual to increase the height by a few inches, and likewise, if the case were opposite, to decrease it.

The top of the framework carries two Monel metal tanks, with lids and clip fasteners on the sides, and handles are placed on each end. The object of dividing the tanks is to secure easier handling. It is contemplated substituting castings for the present sheet metal fasteners for the handles and clips in the next lot of these trucks. The interior of the tanks has a standing diaphragm raised about 3 inches from the bottom, and pierced with openings suitable for the reception of the aluminum food-carrying vessels. These vessels will vary in size according to the needs of the institution using them, but it is usual to figure on a basis of about twenty to twenty-five patients being served from one cart. The vessels, of whatever size, are of a standard pattern and a standard manufacture, in order that replacements may be cheap and easy. The bottom of each tank contains an ordinary plug stopper made of brass, ground in so that the tanks may be drained into a vessel placed on the upper shelf when necessary.

The finish of the trucks is white enamel, except the counter shelves and regular shelves, which are of Russian iron, and the tanks, which, as before stated, are Monel metal. The handles at each end are nickel, and the ends also carry a number. At one end is placed a card holder suitable to the size of the diet card used by the institution.

New Sink for Plaster Work

In presenting this illustration of a sink with a plaster trap attachment, developed at the suggestion of Mr. Oliver H. Bartine, superintendent of the New York Society for



Sink for plaster work.

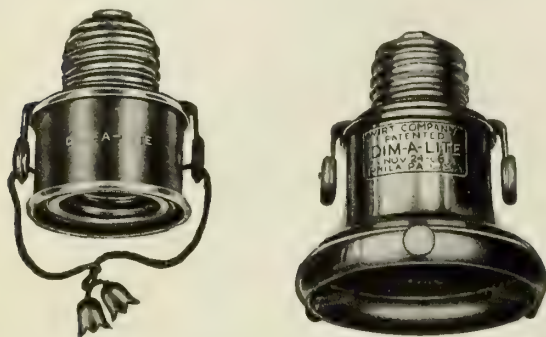
the Relief of the Ruptured and Crippled, special attention is called to the necessity of all hospitals installing a plaster trap to all sinks used for plaster work in order to prevent stoppage by waste lime, which so frequently occurs. The accumulation of particles of plaster becomes hardened and is impossible to remove by the usual methods, and necessitates the tearing up of pipe, causing inconvenience and expense. The sink was designed

especially for plaster cast work, and will be found advantageous to all institutions because of the protective rim and drain traps.

Dim-a-Lite Rheostat

One of the most convenient and comfort-giving electrical appliances for use in hospitals is a little device known as the dim-a-lite. The dim-a-lite is a small, inconspicuous attachment that makes it possible to turn an incandescent electric lamp up or down just like gas. In principle, the dim-a-lite is a compact and indestructible rheostat, which is manipulated by pull chains to reduce the normal current through the lamp filament. There are five changes of light—full, half, dim, nitelite, and out.

Dim-a-lites are especially valuable in hospitals, sanatoriums, and similar institutions. By adjustment of the

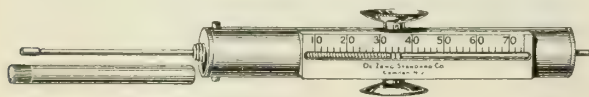


Dim-a-lite rheostat.

chain-pull, one may have a modified light, a full-on in emergency, or a mere glow during the night. With extension cords, they can be easily controlled by any patient. There is also manufactured a dimming socket, which may permanently replace any ordinary key or chain-pull sockets now installed on brackets or fixtures. The action of this dimming socket is the same as in the dim-a-lite.

Simplified Tonometer

A new type of tonometer for taking direct readings of the intraocular pressure in glaucomatous eyes has been devised by Dr. Souter. This instrument is extremely simple in construction and method of application, giving direct readings, which are taken with the patient in upright position and thus a diagnosis can be rapidly made. It contains fewer parts, is smaller and more portable, as well as less expensive, than other tonometers which are now in use, and it is therefore claimed by the inventor that on account of these facts this tonometer is especially well adapted for clinical and hospital use. The instrument is about the size and weight of a fountain pen, and may be carried in the vest pocket. It is constructed entirely of metal, and consists of a light tubular body, with side



Souter's tonometer

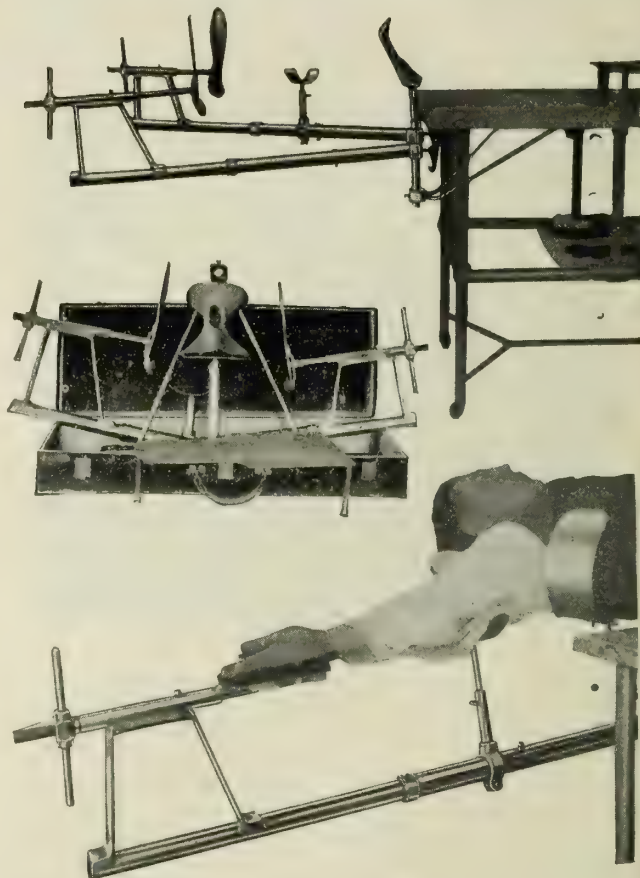
finger grips and open scale, and has also internal end caps, which support a resiliently balanced sound with piston index.

A stop or break is provided near the forward end of the casing on either side for temporarily retaining sound in diagnostic position for reading. The counterpoise construction is exact, and includes antifriction bearings for

the sound and a compensating precision spring, which is made of uniformly drawn phosphor-bronze wire. As the elastic limit of the spring greatly exceeds the requirements, the reliability of the instrument should remain unimpaired irrespective of time or use. The scale calibrations are accurately cut into the metal, and represent pressure in millimeters of mercury. The instrument is well finished in black nickel, the scale contrasting clearly in white. The contact portion of the sound may be sterilized in the usual manner without injury. Complete directions of technic are furnished with the instruments by the manufacturers.

Extension Apparatus

Mechanical devices for the purpose of making traction in fracture cases and general orthopedic work have become quite popular with surgeons, and several different apparatus and tables have been offered to the profession during the last few years. Recently a new apparatus has been presented by Dr. Charles Geiger, which is so arranged that it can be attached to a regular operating table, thus converting it into an orthopedic table, as will be seen by the accompanying illustrations. The extension arms are made of steel tubing, telescoping, the extension



Geiger extension apparatus.

ranging from 12 to 40 inches, and the apparatus is available for any size person. The elevation of the so-called saddle supporting the hips has a range of 6 inches, which will easily allow the application of plaster of paris casts to the hip and back of the patient. Three foot plates of different sizes, as well as three different sizes of plates molded to fit the hand, are provided. The whole apparatus can be taken apart and packed into a carrying case for transportation.

Apparatus for Handling Helpless Invalids

An apparatus for raising and moving about helpless patients has recently been put on the market under the name of Bair's wheel crutch. It is claimed for this apparatus that with its assistance a heavy patient can be raised or lowered with but little exertion by a nurse or even a child. It is not necessary for the patient to exert

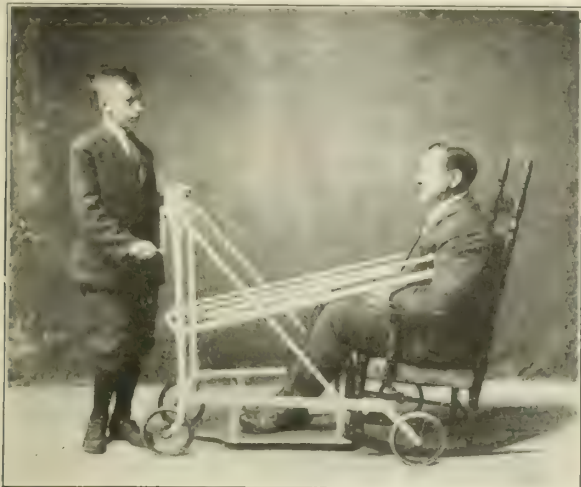


Fig. 1. Apparatus for handling helpless invalids. Sitting position.

himself at all, and he can be handled comfortably, although his arms and legs may be absolutely helpless.

The construction of the apparatus is such that the two rear wheels can be pushed under the bed, and they are far enough apart to go on either side of an extra wide chair, yet not too wide to allow the apparatus to pass through a common door. The crutch saddles are so arranged that they are always in a horizontal position, and they can be quickly adjusted to fit any size patient.

Fig. 1 shows the general construction of the apparatus



Fig. 2. Apparatus for handling helpless invalids. Standing position.

and Fig. 2 illustrates the patient in standing position after having been raised from a low chair.

The manufacturers evidently are confident that this apparatus will do all they claim for it. They submit testimonials from users of the wheel-crutch and offer to send the apparatus for inspection and trial to any responsible person or institution.

An All-Metal Hot Water Bottle

This is a new hot water bottle, made entirely of metal, for which the manufacturers claim many advantages over other metal bottles that have been offered in the past. One of the principal advantages mentioned is the convex exterior, which has increased its utility to a remarkable degree, as it conforms to the form of the human body. It is a well-known fact that, as water cools in a metal bottle, a vacuum is formed, and, unless the interior is reinforced, a gradual collapse takes place from atmospheric pressure. On account of the peculiar construction with an internal spring, this bottle at once resumes its normal



"Cello" all-metal hot water bottle.

shape as soon as the stopper is removed. It has been proven that a metal bottle will retain the heat about 50 percent longer than the ordinary rubber hot water bottle. The use of such a device, therefore, should not only afford added comfort to the patient on account of not being disturbed so frequently for the purpose of renewing the hot water, but should also lessen the labor of the nurses and attendants.

Another advantage claimed is that it produces the dry, penetrating heat needed in many cases, and that it will stand any temperature attainable, is self-sterilizing, and there is no possibility of leaking or bursting. An air chamber around the neck of the bottle permits of comfortable handling, and a soft flannel bag is furnished with each bottle, so that no metal will come in direct contact with the skin.

The original cost of the apparatus does not appear to be excessive, and, as the manufacturers offer a five-year guarantee with the bottle, it seems that it should commend itself to hospital superintendents or purchasing departments. The bottle is manufactured by A. S. Campbell Company, of Boston, or can be secured at any reliable physicians' supply store.

Miss Margaret H. Dugan, a graduate of the Long Island City Hospital, class of 1904, is supervising nurse at the new Queensboro Hospital for Contagious Diseases, recently opened at Jamaica, L. I., by the New York City Department of Health. Since her graduation Miss Dugan has seen service in the Kingston Avenue Hospital, Brooklyn; the Willard Parker Hospital, Manhattan; the Riverside Hospital, Bronx; and the New York city tuberculosis sanatorium at Otisville.

As a "preparedness" measure against summer fevers, the city health department of San Antonio, Tex., is enforcing, among other precautions, an ordinance which requires stable refuse to be put in air-tight receptacles daily. The city has recently completed a system of sanitary sewers, which is making the work of the health department easier.

HINTS FOR HOSPITAL SUPERINTENDENTS

This column is maintained as a help and reminder to hospital workers about the little things in administration. It is urgently requested that everyone contribute his and her "hints." Each item added to our knowledge helps to fill the common storehouse from which all may draw supplies.

There is a wise old saying, "sufficient unto the day is the evil thereof." This maxim ought to be hung over the desk of every hospital superintendent. It would be a tremendous inspiration not to go out looking for tomorrow's troubles today. It is said that no one ever died from hard work—it is only worry that kills; and it is almost equally true that there is not enough trouble coming to us from hour to hour or day to day to overcome us. It is only when we accumulate a whole lot of troubles of the recent past, and go out borrowing troubles from the future, that we are overcome.

Accuracy is one of the most impressive of all virtues. The hospital superintendent who can convince his or her trustees, members of the medical staff, and the employees that he or she is thoroughly informed on all topics that can come up in connection with the hospital's activities, will have achieved a 50-percent success at the very outset of an attack on any problem. Another most valuable and indispensable virtue in a hospital superintendent is the ability to say, "I don't know." This should always mean, however, that "I shall immediately find out." The hospital that is fortunate enough to have a superintendent to whom everybody can feel that they can go for information is very likely to be a very well-governed institution.

There should be a place for everything in the hospital, and everything should be kept in its place. It is not what you have in stock that makes your supply valuable, but it is what you can get at immediately when it is wanted. A pair of crutches that cannot be found in the store room are a poor substitute for a good leg; a piece of apparatus for a surgical dressing or for a splint that happens to be somewhere else when it is wanted is not a very serviceable support for a broken bone. All of us have seen medicine cabinets with four or five bottles of the same medicine in them because the medicine nurse found it easier to send to the drug room for a new bottle than to wade through her heterogeneous stock and find the one she ordered day before yesterday. Every hospital in this country has its attics and store rooms full of stuff that either ought to be in use or else destroyed, or sold to the junk man.

Most hospital superintendents attempt to do too many details of their work. Of course, there are very small hospitals in which the superintendent has to do very many things; she keeps the books, runs the training school, or at least handles the nurses; she sees personally to the nursing of each patient, she buys supplies, directs the cleaning force, has a hand on the levers in the power plant, and some of the trustees even expect her to stoke the fires. What opportunity has a superintendent under such cir-

cumstances to husband ideals or to dream dreams about service? What inspiration is there for her to think beyond the mere sordid duties of the hour?

The wise superintendent, either in a large or small hospital, will find it even economical to have the necessary people to perform the manual work about the institution. She isn't paid to work with her hands, she is not fitted either by education or training or practice for manual labor, except occasionally to do some piece of complex technic to show an employee how to do it. The hospital superintendent is paid in accordance with the amount and quality of gray matter she possesses and the application she knows how to make of it. So, do what you are paid to do and let others do what they are paid to do—and everybody will do it better.

Are we not riding our hobby of "all-white" in our hospitals too hard? From some reports that have recently come out of enamelware factories, hospitals are going to have to pay for all-white enamelware furniture, beds, and utensils. It is stated on excellent authority that it is very much more difficult, and consequently more costly, to put white enamel on metal than it is to put olive-green, for the reason that olive-green enamel is made up on a base of iron which hardens much more rapidly and is cheaper than the zinc, which is the base of the white enamels. It costs approximately 25 or 30 percent more for a white article than it does for an olive-green; the olive-green bakes very much harder and better and lasts very much longer than the white.

If we can just get away from the "all-white" idea, we will profit by using green. Of course, we began to use "all-white" because it showed up the dirt better, and really compelled us to scour and scrub oftener in order to maintain the appearance of cleanliness; but, after all, a nice, clean, unchipped piece of olive-green furniture will look very much better than a chipped piece of white. We had better think about this a little bit.

How many hospital superintendents are there who make it a rule to analyze carefully and judiciously the pros and cons of every step they take? It is true that there are a lot of things in hospitals that are not standardized, but there are a good many things that are, and almost everything that we think about doing is capable of some constructive analysis. For instance, let us speculate as to whether the thing we are thinking about doing really ought to be done—and why. Then let us speculate on the process of its doing; first, the most efficient way to do it—that is, the most satisfactory way, the way that will give the best results after the job is completed. Then let us think about the economical way. After we have got this far along we are just half way, because the main point is yet to be accomplished—viz., who shall do the job? Shall the superintendent himself do it as a time-saving operation and because he knows exactly what he wants and how he wants it, or is his time too valuable to spend in a detail, and, if so, who is there in the hospital whose time is not so valuable and yet who can accomplish the job and give an efficient result?

Nearly everything we do is capable of quiet, quick calculation as to cash, and before we give an order for the expenditure of a dollar we ought to know just about where we are going to come out in dollars and cents; oftentimes we start in on some little job and we find before we get through that it has grown to be quite a large operation and costs entirely out of proportion to the actual value of it.



THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. VII

September, 1916

No. 3

PROPOSED NUMERICAL SYSTEM OF HOSPITAL RECORDS

Value of Records and Their Function—Essential Features of a Record System—Nomenclature—Faults of Various Existing Systems—The Numerical System, With Details of Performance—Illustration of the Work in the Departments

BY ALBERT H. MILLER, M. D., PROVIDENCE, R. I.

THE record system of a hospital has two principal functions: first, it provides a working record of each case while in the hospital, and the records should furnish for this purpose the necessary data, with the minimum repetition and copying; second, it provides the means for scientific reference to the work of the institution, and science being systemized knowledge, the record system of a hospital is the foundation on which all scientific work in the institution must rest.

It should be possible to find from the records—the history of any patient whose name is known, with the record of operations, x-ray examinations, and pathological reports connected with the history; a series of cases of any disease treated in any period of time or on any service, the method of treatment, and the results obtained; a series of operations, x-ray examinations, or pathological reports on any condition during any period or on any service; the complications attending any condition during any period; the number of patients in the hospital on any day, the number treated in any department during any period, the average stay in the institution, and such other data as are considered valuable in making up an annual report.

ESSENTIAL FEATURES OF A RECORD SYSTEM

Although there are many diverse opinions concerning the methods of making and filing records, a brief consideration of the matter will show many points on which all authorities must agree. The first essential for a record system is an accurate individual record, and the visiting staff of the hospital must be sufficiently interested to see that the

records are properly made. Histories, records of operations, and pathological and x-ray reports must not be postponed, but made on the spot in such a way that they may be included in the record system. Records of operations are best dictated by the surgeon himself at the time of or soon after the operation. The original record should be entered on the standard record sheets and become a part of the record system. Copying of data must be avoided as far as possible.

NOMENCLATURE

A uniform system of nomenclature of diseases must be adopted. It is clearly a waste of time to write of a series of cases of Grave's disease when many cases entered as Basedow's disease, Perry's disease, or exophthalmic goiter are not included. It may be difficult to collect a series of cases of cancer of the uterus when many of the cases are recorded as uterine cancer. The "International Classification of Diseases" has been adopted by all English-speaking countries and by Belgium, France, Holland, and Japan. As elaborated in the Bellevue Hospital nomenclature, it answers most requirements of the present time. It remains for the classification of diseases to be separated into sections corresponding to the services of the hospital, and there will then be a list of diseases corresponding to each service of the hospital. The question of diagnosis is of too great importance to be settled by the house doctor alone. The diagnosis, agreeing with nomenclature selected, must be entered on the history and the visiting physi-

cian's or surgeon's name signed before the patient is discharged.

ALPHABETICAL AND NUMERICAL INDICES

The record system must include an index of patients by name arranged alphabetically, an index of diseases arranged alphabetically under the headings of the nomenclature, an admission book, and a discharge book. Whenever the attempt has been made to omit the admission or discharge book, some less efficient substitute has been used.

FILING OF RECORDS

Alphabetical files should be kept on cards and numerical files in bound books. Numerical filing on cards is more expensive, more bulky, less accurate, and less convenient than filing in books. An alphabetical file in a bound book diminishes in value as it increases in size. In a hospital where the index of names is kept in a bound book, it may be necessary to look through a thousand names beginning with the letter B in order to find John Brown's record.

The histories may be filed in the record room in four ways. First, alphabetically by name of patient; this method of filing has no advantages. Second, alphabetically by name of disease; the change in the system of nomenclature, which is sooner or later inevitable, will introduce complications due to this method of filing histories. Third, numerically by admission number; this is an unnatural method, and necessitates keeping a series of histories on hand until all the patients in the series have been discharged before the histories can be permanently filed; it introduces complications due to the fact that the diagnosis on discharge and not that on admission is the final diagnosis which must appear in the records. Fourth, numerically by discharge number; this is the natural method of filing histories; it lends itself naturally to the introduction of an end result system and to the work of an efficiency committee; the introduction of a key to the admission numbers brings to this method all the advantages of filing histories by admission number.

TRANSFER OF PATIENTS AND HISTORIES

If a case of appendicitis, for example, is found to have been entered on the medical service, the patient will be transferred to the surgical service; the history also will be transferred and will not appear among the records of medical cases. In case a patient is cured of a medical disease and wishes treatment for a surgical condition, he will be discharged and reentered on the surgical service. In this way a case of a certain disease appears only once in the records, but a patient who suffers from two distinct diseases will appear twice in the records.

STANDARDIZATION

All records should be made on a standard size of paper. Economy and convenience in obtaining filing devices immediately settle this point. The quarter sheet, about 6½ by 11 inches, is the size frequently chosen. The adoption of a standard record system for use in all hospitals would be of great economic advantage. It is doubtless true that the ideal system for use in a large hospital would also furnish the foundation for the best system for the small hospital.

PRESENT HOSPITAL RECORD SYSTEMS

In many hospitals the record systems are antiquated, inefficient, and inaccurate. Frequently the really valuable part of the records is kept on slips of paper, which are not preserved as part of the system and are soon destroyed. It is impossible at present to obtain statistics of treatment and results, of post-operative complications, and of anesthetic mortality. We cannot learn the comparative merits of the present treatment of typhoid fever, the value of the Fowler position, or the actual status of the adenoid operation. The statistics obtained from hospital records are so inaccurate that some institutions are considering the advisability of omitting the medical and surgical data from the annual report.

END RESULT SYSTEMS

The fact has recently been recognized that a follow-up system is an essential part of the record system of a hospital. The Committee on Standardization of Hospitals of the Clinical Congress of Surgeons in 1914 reported the following end result system:

Each case which goes to the operating room has a surgeon's card, which is given to the surgeon to fill out as soon as he is through operating. After the operation the card goes with the temperature chart to the patient's bedside, and at his discharge the complication item is filled out and O. K.'d by the surgeon. The card is then given to the librarian, by whom the data on it are neatly transferred to a permanent end result card, which is filed alphabetically. Cases which are not operated on have similar cards made out by their medical attendants. Each morning a clerk writes a routine letter to every patient who was discharged exactly a year before, asking him to report to the accident room or to reply by letter. Notes of their replies are made on the backs of the end result cards. To compile an annual report, it would be merely necessary to have the data on these cards edited and printed in book form.

The foregoing system has fifteen enumerated advantages, and has been adopted by and is in op-

eration in a number of institutions. The system may be criticised as follows: It presumes that the surgeon is incapable of neatly filling out the end result card, and substitutes a copy for his original record. It fails to follow up the treatment of patients who are discharged to the outpatient dispensary. It provides the least efficient and most expensive way for determining what patients were discharged exactly a year before, the cards being filed alphabetically and not in the order of discharge. Notes of replies from patients are copied on the backs of the end result cards and not into the histories, where they would be of greater value in connection with the other data of the case. This end result system is typical of the attempts which are made to collect information of some branch of a hospital which has no efficient record system.

THE NUMERICAL SYSTEM OF HOSPITAL RECORDS

The record system here presented is the result of a study of the systems in use in a large number of institutions. The object has been to adopt the best features of each system, to avoid objectionable features, and to combine the result with the necessary original features to form an efficient system of records. As all data are entered in two different numerical files, the accuracy of any part of the system may at any time be determined.

For a hospital of average size the system requires the following forms:

1. **ADMISSION BOOK.**—Consecutive admission number, date, time (a. m., p. m.), name, residence, birthplace, name of parents, age, M. F. M. S. W. B. W., occupation, religion, previous hospital treatment, admission diagnosis, duration of disease, recommended by (Dr., ambulance, O. P. D. No.), name of (relative, friend), address of same, nearest telephone No., service, ward, private room, private patient (Dr.), transfer (service, ward, date).

2. **DISCHARGE BOOK.**—Consecutive discharge number, name, date, time (a. m., p. m.), admission date, days in house, diagnosis, complications, condition, reentry, recommended to O. P. D., end result letter sent, reply, second letter.

3. **FIRST PAGE OF HISTORY.**—Admission number, date, time (a. m., p. m.), name, residence, birthplace, age, M. F. M. S. W. B. W., occupation, admission diagnosis, duration of disease, recommended by (Dr., ambulance, O. P. D. No.), service, ward, transfer (ward, service, date), private room, private patient (Dr.), surgeon, physician, house doctor, discharge number, discharge date, days in house, recommended to, diagnosis, complications.

4. **BLANK HISTORY CARDS.**

5. **DISCHARGE OR TRANSFER SLIP.**—Admission number, name, discharge from (ward, service), transfer from (ward, service), transfer to (ward, service), date, bookkeeper, superintendent.

6. **OPERATION BOOK.**—Consecutive operation number for hospital year, date, admission No., name, operation, surgeon, anesthetic.

7. **PATHOLOGICAL BOOK.**—Consecutive pathological number for hospital year, admission No., name, organ or tissue, date of report, anatomical diagnosis, pathologist.

8. **X-RAY BOOK.**—Consecutive x-ray number for hospital year, date, admission No., name, section of body, number of plates, x-ray diagnosis, reporter.

9. **OPERATION CHART.**—Admission No., ward, date, operation No. (filled in by operating room nurse), name, examination (dyspnea, edema, false teeth, heart, lungs, urine, arteriosclerosis), previous anesthesia, preliminary medication, service, time for operation (above data to be filled in ward), surgeon, assistant, anesthetic, anesthetizer, stimulation, chart for recording duration of anesthesia and of operation (amount of anesthetic, the pulse, respiration, color, pupil, and blood pressure), description of operation (position, incision, technic), (above data to be filled in by anesthetizer), recovery—nausea and vomiting—

Anesthetic started, X. Operation started, O. Operation completed, C.

	5	10	15	20	25	30	35	40	45	50	55
ANESTH											
PULSE											
RESP.											
PUPIL											
COLOR											
ANESTH.											
PULSE											
RESP.											
PUPIL											
COLOR											
ANESTH.											
PULSE											
RESP.											
PUPIL											
COLOR											

immediate (noted in the operating room), secondary, post-operative complications—(above data to be filled in ward).

10. **PATHOLOGICAL CHART,** half standard sheet.—Admission No., ward, date, pathological No. (filled in by pathologist), name, age, service, Dr., organ or tissue, clinical history in brief, clinical diagnosis (above data to be filled in operating room or ward), date of report, anatomical diagnosis, pathologist.

11. **X-RAY CHART,** half standard sheet.—Admission No., ward, date, x-ray No. (filled in x-ray room), name, service, Dr., radiograph wanted of, position or direction, information sought, directions as to dressings (above data to be filled in ward), x-ray report and diagnosis, reporter.

12. **NAME CARD,** 3 by 5.—Name, address, name of (relative, friend), address of same, nearest telephone No., service, ward, transfer (service, ward, date), Dr., intern, discharge diagnosis, discharge No., admission No.

13. **DIAGNOSIS CARD,** 3 by 5.—Disease, complications, name, surgeon, physician, discharge No., operation No., x-ray No., pathological No., result.

14. **LEDGER CARD.**—Name, admission No., address, admission date, ward, time (a. m., p. m.), private room, private patient (Dr.), transfer, date, rate of board, security, address of same, deposited in advance, discharge No., discharge date, days in house, payments.

15. **AMBULANCE BOOK.**—Consecutive ambulance number for hospital year, date, name, address, place of call, destination, diagnosis, recommended by Dr., time (leaving, return, a. m., p. m.), surgeon, driver.

16. **ACCIDENT ROOM BOOK.**—Consecutive accident number for hospital year, date, time (a. m., p. m.), name, address, place of accident, nature of accident, treatment, referred to O. P. D. (Dr.).

17. **O. P. D. ADMISSION BOOK.**—Consecutive admission number, date, name, address, dates of treatment, discharge, date, transfer to, date, reentry.

18. **O. P. D. DISCHARGE BOOK.**—Consecutive discharge number, date, name, diagnosis and complications, condition, recommended to.

19. **O. P. D. FIRST PAGE OF HISTORY,** 6 by 8 card.—Admission No., date, name, address, occupation, birthplace, M. F. M. S. W. B. W., age, department, provisional diagnosis, diagnosis, surgeon, physician, transfer to, date, discharge, condition on discharge, dates of treatment.

20. **BLANK HISTORY CARDS.**

21. **O. P. D. TICKET.**—Admission No., name, address, department.

22. **O. P. D. NAME CARD,** 3 by 5.—Name, address, admission No.

23. **O. P. D. DIAGNOSIS CARD.**—Disease, admission No., name.

24. **O. P. D. TO HOUSE,** perforated slip.—Name — is recommended by the — O. P. D. for admission to the house, O. P. D. admission No.; name —, O. P. D. admission No., O. P. D. service, date, diagnosis, complications, treatment in O. P. D., physician or surgeon, diagnosis on discharge from house, complications, treatment in house, physician or surgeon, house discharge No., operation No., pathological No., x-ray No.

25. **HOUSE TO O. P. D.,** perforated slip.—Name — is recommended by the — service to the O. P. D., house discharge No.; name —, house discharge No., service, date, address, occupation, age, M. F. M. S. W. B. W., days in house, diagnosis on discharge from house, complications, treatment in house, physician or surgeon, operation No., pathological No., x-ray No., diagnosis on discharge from O. P. D., complications, treatment in O. P. D., physician or surgeon, result, O. P. D. admission No., date of discharge from O. P. D.

26. KEY TO THE ADMISSION NUMBERS.—Slips of paper containing a consecutive list of admission numbers, with the corresponding discharge number entered opposite each.

27. SLIPS FOR CONVENIENCE AND AIDS TO MEMORY.—Not permanent records. Example, an ambulance slip given to the surgeon when leaving on an ambulance call.

OPERATION OF THE NUMERICAL SYSTEM OF RECORDS

1. AMBULANCE.—On returning from an ambulance call, the surgeon makes the proper entry in the ambulance book (15) in the main office, under the consecutive number. The ambulance book is of the loose-leaf type. At the end of each hospital year the leaves are permanently bound and filed in the record room.

2. ACCIDENT ROOM.—For each patient treated in the accident room the proper data are entered in the accident room book (16) kept in the accident room, under the consecutive number. The accident book is of the loose-leaf type. At the end of each hospital year the leaves are permanently bound and filed in the record room. For each accident room case not admitted to the house an O. P. D. history card (18) is made out. These cards are sent to the O. P. D. each morning and filed within the O. P. D. histories.

3. ADMISSION TO THE HOUSE.—When a patient is admitted to the house, the admitting physician or a clerk in the main office fills in the proper data in the admission book (1), under the consecutive admission number, fills out the first page of the history (3), makes out the name card (12) and the ledger card (14). The admission books are kept in the main office, but are filed in the record room when full. The first page of the history accompanies the patient to the ward. The name card is filed in an alphabetical index in the office while the patient is in the house. The ledger card is filed in the bookkeeper's office under the headings—patients in house, open accounts, and closed accounts.

3. MEDICAL HISTORIES.—The histories are continued on the first sheets and subsequent sheets (4) of the same size.

4. OPERATION RECORDS.—A patient sent to the operating room is accompanied by an operation chart (9) which has been started in the ward. After the operation the proper data are filled in by the anesthetizer or a clerk at the dictation of the surgeon. The operating room nurse makes the proper entry, under the consecutive operation number, in the operation book (6), kept in the operating room. At the end of each hospital year the sheets of the operation book, which is of the loose-leaf type, are permanently bound and filed in the record room. The nurse also enters the operation number on the operation chart. This

chart is returned to the ward as soon as possible and accompanies the first page of the history.

5. RECORDS OF OTHER MINOR DEPARTMENTS, AS X-RAY ROOM OR PATHOLOGICAL LABORATORY.—The procedure in these departments is the same as in the case of operation records.

7. TRANSFER TO A DIFFERENT WARD OR SERVICE.—The proper data are entered on a transfer or discharge slip (5). This slip is sent to the bookkeeper's office and the main office, where the required corrections are made in the indices and the fact noted on the slip in the spaces designated for the purpose. The slip is then sent to the ward and the transfer is made. The history accompanies the patient on transfer.

8. DISCHARGE FROM THE HOUSE.—Before a patient can be discharged, the diagnosis and complications must be entered on the history and signed by the visiting physician or surgeon. When the patient is to be discharged, a discharge or transfer slip (5) is properly made out in the ward. This slip is sent to the bookkeeper's office and the main office, where the records in these offices are completed. The ledger card is transferred to the section of open or closed accounts. The name card is removed from the index and sent to the ward with the discharge slip, which has been checked up in the two offices. A clerk also makes the proper entry in the discharge book (2). This is a loose-leaf book kept in the office and numbered consecutively. When full, the discharge books are permanently filed in the record room. When the discharge slip has been returned to the ward, the patient may be discharged. The completed history is sent to the main office as soon as possible after discharge, and is accompanied by the name card. In the office a clerk enters the discharge number on the history, which is then sent to the record room.

9. RECORD ROOM.—When a history reaches the record room, the clerk files the name card (12) in its alphabetical order in a file by name. The clerk also makes out a diagnosis card (13), entering the discharge number, the numbers of operation sheets, pathological sheets, or x-ray sheets in the spaces designated on the card and files it in a file arranged with the headings of the nomenclature chosen. This file is subdivided by years. The history is filed numerically by discharge number. The record room clerk keeps duplicate keys (26) to the admission numbers. These keys serve as a check on the accuracy of the system and are available for research work.

10. OUT-PATIENT RECORDS.—A new out-patient is given a ticket (21), which he keeps and presents each time he visits the O. P. D. It is taken up when he is discharged. All O. P. D. records are kept in the O. P. D. record room. In a small

clinic, histories are filed alphabetically by name and no name index is necessary (19, 22). In a large clinic the histories are filed numerically by admission number. In either case the cards of discharged patients are kept in a file separate from the active cases. On admission a clerk makes the proper entry in the O. P. D. admission book (17) and fills out the first history card (19). The name card (22) is filled out and filed alphabetically. Subsequent histories are written by the physician or surgeon on the history cards (19, 20). When a patient presents a ticket at the O. P. D. office or record room, a clerk enters the date in the admission book (17) under the admission number learned from the ticket (21). The history is taken from the file and sent to the proper department. At the close of the clinic the histories are returned to their places in the file. When a patient is transferred to another department, the fact is noted in the admission book and on the first history card. When a patient is discharged, the fact is entered in the admission book and on the first history card. It is also entered in the O. P. D. discharge book under the consecutive discharge number.

11. DISCHARGE FROM HOUSE TO O. P. D.—In the case of a patient recommended to the O. P. D. the house doctor makes out a house to O. P. D. slip (25). The first part of the slip is given to the patient, who presents it at the O. P. D. for admission and exchanges it for a ticket (21). The second part of the slip is sent to the O. P. D. record room, where it is attached to a history card, which is immediately made and filed in the O. P. D. system. The slip is later called to the house record room as a part of the end result system.

12. DISCHARGE FROM O. P. D. TO HOUSE.—In the case of a patient recommended to the house, the surgeon or physician fills out an O. P. D. to house slip (24). The first part of the slip is given to the patient, who presents it at the main office for admission. The second part is sent to the main office, where it is placed on file until the patient appears. On admission the slip accompanies the patient's history, and on discharge from the house it is returned to the O. P. D. record room, where it is attached to the original O. P. D. history.

13. CHECKS ON THE ACCURACY OF THE SYSTEM.—Each night at midnight the night superintendent of nurses takes a census of the patients in the house. The next morning the result is compared with the office records. The last discharge number subtracted from the last admission number should equal the total number of patients obtained from the actual count. The index in the main office and the patients in house from the

ledger should give the same figure. In case a discrepancy appears, it may be readily corrected. The accuracy of the operation reports, x-ray reports, or pathological reports, as filed in the record room, may be checked up at any time from the operation or other special book, a key to the admission numbers, and the filed records or diagnosis cards. Loss of a history on the way to the record room will be detected by absence of its discharge number from the admission number key.

14. END RESULT SYSTEM.—By consulting the discharge book (2) on stated days, a clerk finds what patients were discharged at a stated time before and sends to each, except to those who were recommended to the O. P. D. or readmitted to the house, a form letter reading as follows:

..... Hospital, Discharge No., Date.

About a year ago you were a patient at this hospital. We will be glad to hear from you as to your present condition, or to have you call at the superintendent's office, bringing this letter with you.

Yours truly,

....., Superintendent.

For the O. P. D. cases the house to O. P. D. slips (11) are called for. All replies are noted in the place designated in the discharge book (2) and are sent to the record room, where they are filed with or entered in the histories. When no reply to the first letter is received, as noted from the discharge book, a second letter is sent and the fact noted in the discharge book.

15. EFFICIENCY OF THE SYSTEM.—Among many tests of the efficiency of the system, the following may be made:

To find the history of any patient whose name is known. Consult the name index (12). Learning the discharge numbers, the histories may immediately be found filed under these numbers.

To collect a series of cases of any disease. Consult the diagnosis index (13). By noting the discharge Nos., the histories of the cases may be readily consulted.

To collect a series of operations for any condition. Consult the diagnosis index. The operative cases will be designated by the operation numbers under the proper heading. By noting the discharge Nos., the histories may readily be referred to.

To find a series of operations for any condition by one surgeon. Consult the diagnosis index. The operations and the name of the surgeon will be found under the proper headings. By noting the discharge Nos., the histories of the cases may be consulted.

To find all the operations performed by one surgeon in any period. Consult the operation book (6). With an admission number key (26) the discharge numbers may be checked up and the histories of the cases readily found among the filed histories.

To find a series of cases of anesthesia. Consult the operation book (6). With an admission No. key (26) the discharge Nos. may be checked up and the histories found among the filed histories. The results alone may be found in the same manner from the discharge book (2).

Many similar tests of the system may be made.

THE LETTERMAN UNITED STATES ARMY HOSPITAL AT SAN FRANCISCO

Institution Is Unique in Being at Once a Government Hospital and a Civil General Institution Open to the People of the City—Newer Buildings Are Good, but Were Expensive, Due to Neglect on Part of Congress

BY OUR SPECIAL CORRESPONDENT, WASHINGTON, D. C.



Dr. Jonathan Letterman.

THE Letterman General Hospital was established in 1899, and was named Letterman to honor the memory of the late Dr. Jonathan Letterman, who rendered distinguished services during the Civil War in effecting an organization of the medical department of the army in the field, and saved the army by

this organization from much of the suffering that is usually experienced in war.

The hospital is used as a base hospital for the Philippines and Hawaii, as a post hospital for the Presidio, San Francisco, Fort Winfield Scott, and several smaller posts in the harbor of San Francisco, and as a general hospital for the western part of the country. It is the largest general hospital in the army. The number of patients admitted during last year, including civilians and general prisoners, was 2,623. This was a decrease of 160 from the preceding year.

An active surgical clinic is maintained at the hospital. Last year there were 34 operations for appendicitis, 24 for hernia, 22 for hemorrhoids, and 125 gynecological. In the gynecological department 56 women were delivered at term, and there were four stillbirths. Two Cæsarean sections were successful. There were 1,791 cases in the eye, ear, nose, and throat clinic, not including treatment and sprays. The dentist reported 1,439 affected teeth treated, with 3,499 sittings.

A large department laboratory is maintained for the use of the hospital and for the special work of the posts in the western department. There are 12 medical officers, 2 dental surgeons, 41 female nurses, 158 hospital corps men, and 37 civilians on duty at the hospital. The capacity of the hospital is about 520 beds.

The original buildings were paid for from the appropriation of \$50,000,000 for national defense, made to meet the expenses of the war with Spain, and the initial cost of the structures was about \$350,000. The buildings first erected, intended for temporary use, were constructed of wood. Those of recent date are of concrete. The present commanding officer, Colonel Guy L. Edie, medical corps United States army, has inaugurated a proj-

ect that contemplates the substitution of all the wooden units with concrete structures. This scheme will be carried out as fast as funds are authorized by the secretary of war. A special appropriation by Congress would not only expedite the work, but save the Government thousands of dollars. The recent improvements have been made in \$20,000 installments, the amount being fixed by the provision of an old statute, passed in 1853, which prohibits the erection of any structure the cost of which shall exceed \$20,000 without special authority of Congress.

The buildings were shaken considerably during the San Francisco earthquake, but, being of wood construction, probably withstood the disturbance better than if they had been constructed of a more substantial material. Congress made a special appropriation of \$45,000 to repair the damage done, and there has been upward of \$500,000 spent at the institution for repairs and additions since the original buildings were constructed, about two-thirds of this amount being used for new construction. All the buildings erected in the last few years, with the exception of the officers' ward, which is frame, are of reinforced concrete construction, with stucco finish on the exterior and red tile roofs. With abundance of foliage on the reservation, plenty of flowers, and military policed grounds, the general appearance of the group of buildings is very pleasing.

The new buildings are officers' ward; ward building; isolation ward; insane ward; kitchen; laundry, dry cleaning, and disinfecting building; female nurses' quarters; two hydrotherapeutic wards; female ward for special surgical cases; and power, heat, light, and refrigeration plant.

The officers' ward furnishes accommodations for twenty-two sick officers. Two rooms have private baths, and the other rooms are provided with bath for every two rooms, with a separate lavatory in each room. The basement contains the kitchen, pantry, with dumbwaiter service to pantry and serving room on floors above, room for vacuum cleaning apparatus, trunk room, room for help and room for cooks, with adequate toilet facilities. In addition to these rooms, a complete hydrotherapeutic outfit has been installed on this floor, with tile floors, tile wainscoting, and marble trimmings throughout. A glance at the floor plans will show the general arrangement, consisting of

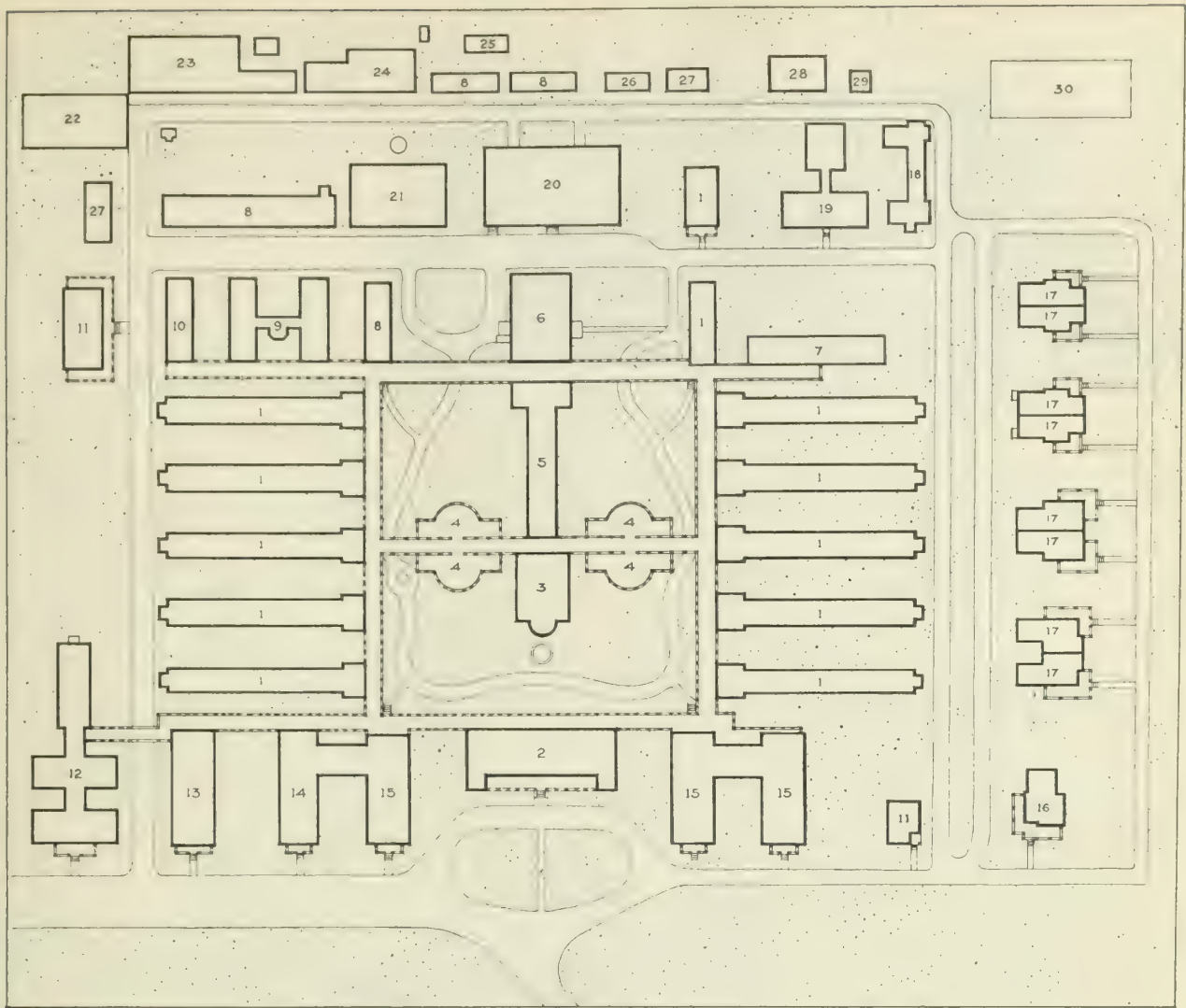


Fig. 1. Letterman United States Army General Hospital. Block plan.

- | | | | | |
|-----------------------------|------------------------------|--------------------------|------------------------------|--------------------------|
| 1. Wards. | 8. Store houses. | 15. Barracks. | 20. Disinfecting and steril- | 26. Paint shop. |
| 2. Administration building. | 9. Hydrotherapeutic wards. | 16. Commanding officers' | izing building. | 27. Garage. |
| 3. Operating pavilion. | 10. Maternity wards. | quarters. | 21. Power house. | 28. Store house for com- |
| 4. Solariums. | 11. Isolation wards. | 17. Officers' quarters. | 22. Wagon shed. | bustibles. |
| 5. Dining room. | 12. Female nurses' quarters. | 18. Greenhouse. | 23. Stable. | 29. Animal house. |
| 6. Kitchen. | 13. Officers' wards. | 19. Insane wards. | 24. Shop. | 30. Tennis court. |
| 7. Laboratory. | 14. Post exchange. | | 25. Shed. | |

a reception room, douche room with shower, perineal, shampoo, continuous bath, sitz bath and control table; cabinet room, pack room, massage room, and lounge room, with dressing rooms, toilets, etc. The first floor has a reception room, dining room, pantry, linen room, utility room, and wards and toilets for nine officers. The second floor has wards and toilets for thirteen officers, serving room, utility room, linen room, and solarium. All the toilets, pantries, serving rooms, and utility rooms have tile floors and wainscoting, and are equipped with modern plumbing fixtures. The messing for the officers' ward is separate from the other pavilions, the expense of which is met by the sick officers, who are charged a per diem rate while in the hospital.

The main ward buildings are one story and basement, each ward having a capacity of 40 beds, and

these are connected to the other buildings by corridors. Four large solariums, with glass sides and roofs, are on the sides of the corridor approaching the mess room, with an outlook on flower ornamented courts.

The insane ward building is a detached structure, being practically a fireproof building. The first floor provides a recreation room, dining room, diet kitchen, hydrotherapeutic room, toilets, linen room, locker room, office, attendants' room, five small wards, and a wire-screened porch. The second floor contains a recreation room, toilet rooms, attendants' room, fifteen small wards, and a wire-screened porch. The floors of the diet kitchen, toilets, and hydrotherapeutic room are tile, with tile wainscoting. These wards are for temporary detention only. During the last year there were 143 cases treated—5 civilians, 7 gen-



Fig. 2. Letterman United States Army General Hospital. Administration building.

eral prisoners, and 131 officers and enlisted men. Of this number 23 were transferred to the Government hospital for the insane at Washington, D. C.; 10 were returned to duty, 1 died, 12 transferred to recruiting officers for disposition, 1 transferred to another hospital, 4 civilians left the hospital, 9 sent home for discharge, 78 discharged on certificates of disability, 4 discharged without honor, and 1 discharged on account of the expiration of his term of enlistment.

The isolation ward building is detached, and has a capacity of about 20 beds. The building is intended for cases of doubtful diagnosis and those requiring complete segregation. The entrances to each floor are by outside stairs only. The basement has a disinfecting apparatus and store rooms. The first floor contains three wards, with separate toilet for each, and diet kitchen, linen room, nurses' room, and office. The second floor has six wards, each with a separate toilet and a linen room.

The laundry, dry cleaning, and disinfecting building is one of the best of its kind, thoroughly equipped with all modern appliances. The structure is one story and basement, 75 by 120 feet, with as much light on all sides and roof as possible.

The female nurses' quarters were erected in three installments, this method and a peculiar condition of the site and foundations having influenced the plan. The exterior is like the other new buildings, stucco on concrete and red tile roof. The interior finish is white enamel, excepting the doors, which are birch, stained to imitate mahogany. Accommodations are provided for a head nurse, who has two rooms and bath, and fifty-six

nurses, who have separate rooms, each room containing a lavatory and a large closet specially arranged, with hanging rods for dresses and electric light. The toilet rooms and baths are conveniently located for each group of nurses, access being possible without crossing the main hallways. The building is also provided with an office, reception room, library, sitting room opening on to a liberal porch, and store and trunk rooms. The dining

room, kitchen, pantries, etc., are in the basement, but the floors are practically at grade, so the rooms have abundance of light and are very desirable. The dining room is finished the same as the other portion of the building and wainscoted with a green-gray burlap. The kitchen, pantries, refrigerator room, and toilets throughout have tile floors and tile wainscoting.

The quarters for the medical officers on duty at the hospital are very commodious.

The new kitchen building is a modern structure, with the latest equipment. The basement contains commissary store room and office, general storage



Fig. 3. Letterman United States Army General Hospital. Officers' ward.

rooms, cook's room and toilets, vegetable preparing room, four cold storage rooms, butcher shop, and an electric elevator to the main kitchen floor above. The main kitchen is 40 by 50 feet, having a large pantry, with refrigerator and food cart room. The diet kitchen is a room about 20 by 30 feet, with its separate pantry and a special room for the dietitian.

The two pavilions for general hydrotherapeutic

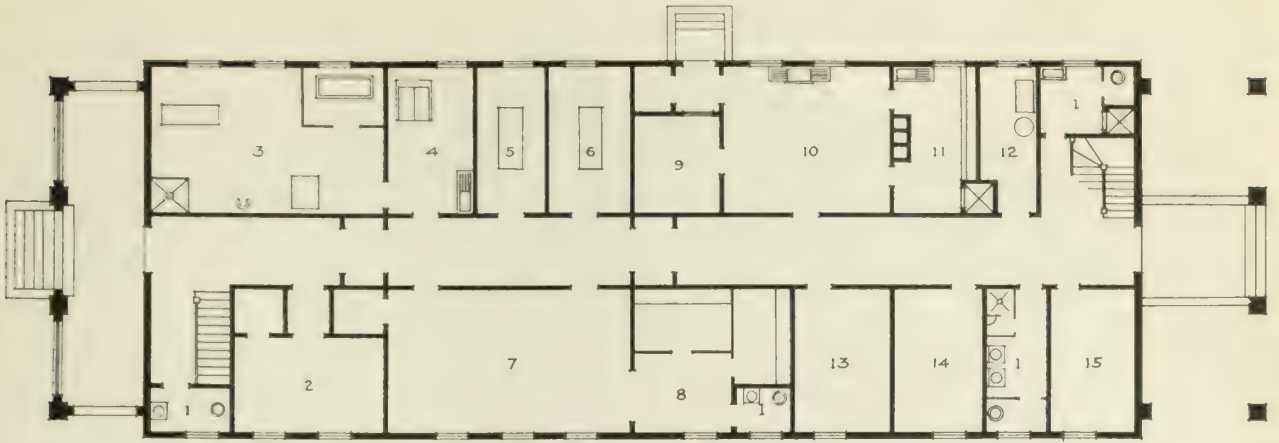


Fig. 4. Letterman United States Army General Hospital. Basement plan of officers' ward.

- | | | | | |
|--------------------|------------------|--------------------|---------------------|-------------|
| 1. Toilets. | 4. Cabinet room. | 7. Lounge room. | 10. Kitchen. | 13. Help. |
| 2. Reception room. | 5. Pack room. | 8. Dressing rooms. | 11. Pantry. | 14. Trunks. |
| 3. Douche room. | 6. Massage room. | 9. Store room. | 12. Vacuum cleaner. | 15. Cooks. |



Fig. 5. Letterman United States Army General Hospital. First floor plan of officers' ward.

- | | | | | |
|--------------------|---------------|-----------------|------------------|-------------------------|
| 1. Toilets. | 3. Attendant. | 5. Dining room. | 7. Linen room. | 9. Connecting corridor. |
| 2. Reception room. | 4. Wards. | 6. Pantry. | 8. Utility room. | |



Fig. 6. Letterman United States Army General Hospital. Second floor plan of officers' ward.

- | | | | | |
|--------------|-----------|------------------|----------------|------------------|
| 1. Toilets. | 3. Porch. | 5. Serving room. | 6. Linen room. | 7. Utility room. |
| 2. Solarium. | 4. Wards. | | | |

treatment are of concrete, with stucco exterior, and red tile roofs, the buildings being one story and basement. The first floor of the treatment pavilion is arranged as indicated by the illustration, a detailed description of which is as follows: The pavilion is connected to the main group by corridors. On the left of the entrance hall is the reception room. The preparation room is arranged with dressing rooms, one recovery room, and toilet, the latter accessible from the other special rooms. The cabinet room contains one electric and one hot air cabinet, both reclining. The douche room has a control table, perineal, shower, sitz bath, and shampoo table. This room has a wood slat



Fig. 7. Letterman United States Army General Hospital. Insane ward.

floor. The bath room has a continuous bath, arranged so that the Nauheim apparatus can be used. The pack room contains a couch, fomentation sink, and blanket warmer. The body and joint baking room contains the massage table and various

joint and body baking equipments. The syphilitic room has a shampoo table, electric cabinet, sink, and blanket warmer. The colon irrigation room contains an irrigation table, sink, lavatory, and water closet. The floors throughout, with the single exception of the douche room, are of tile, and all walls are wainscoted with tile 5 feet high, except the douche room, where the wainscoting is marble 7 feet high. All partition work in the various rooms is marble. The treatment pavilion is connected to the hydrotherapeutic ward

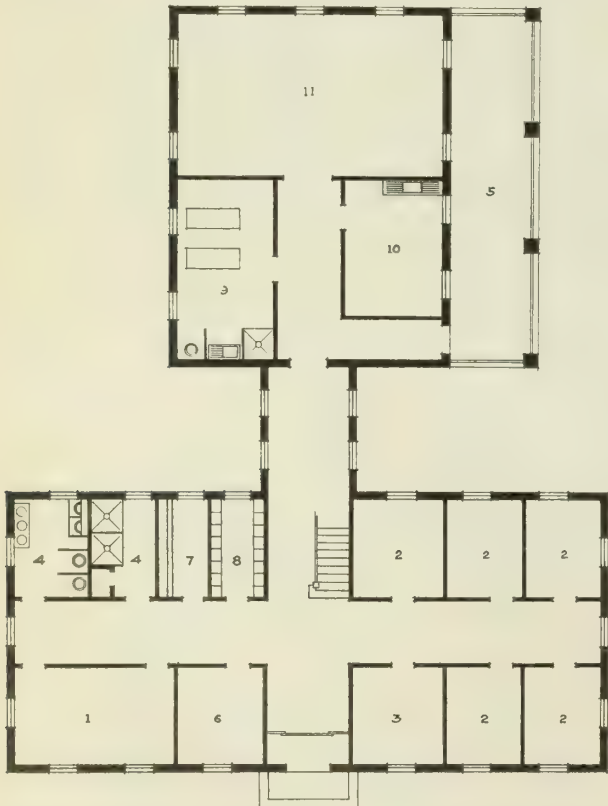


Fig. 8. Letterman United States Army General Hospital. First floor plan of insane ward.

- | | | |
|---------------------|--------------------------|-----------------------|
| 1. Recreation room. | 5. Porch, wire-screened. | 9. Hydrotherapeutics. |
| 2. Wards. | 6. Office. | 10. Diet kitchen. |
| 3. Attendant. | 7. Linen room. | 11. Dining room. |
| 4. Toilets. | 8. Locker room. | |

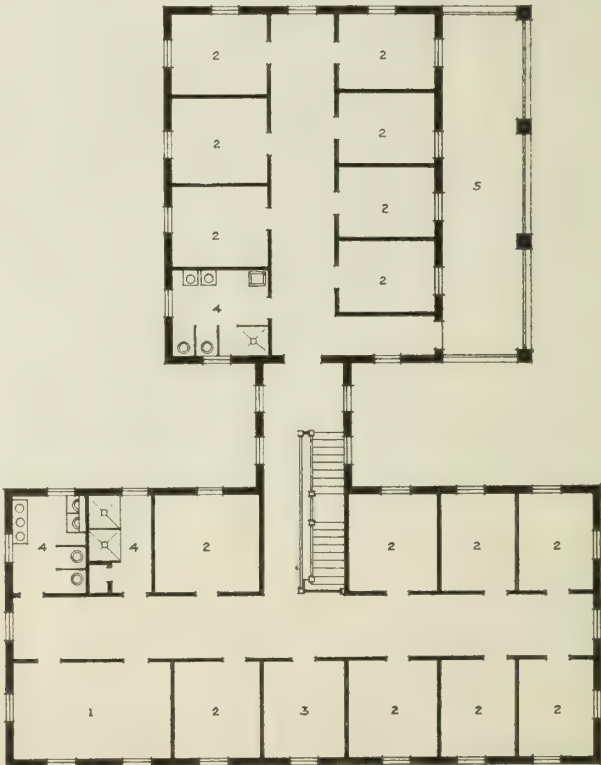


Fig. 9. Letterman United States Army General Hospital. Second floor plan of insane ward.

- | | | |
|---------------------|---------------|--------------------------|
| 1. Recreation room. | 3. Attendant. | 5. Porch, wire-screened. |
| 2. Wards. | 4. Toilets. | |



Fig. 10. Letterman United States Army General Hospital. Laundry, dry cleaning, and disinfecting plant.

pavilion by corridor containing a small lounge room. The ward pavilion has one ward of 8 beds, nurses' room, linen room, toilet room, diet kitchen, and three recovery rooms. The toilet and diet kitchen have tile floors and tile wainscoting, and are equipped with modern plumbing fixtures. It is the intent to equip the rooms in the basements of these two pavilions with modern gymnastic appliances, to augment the efficiency of the hydrotherapeutic treatment.

The female pavilion for special surgical cases contains one 4-bed ward, three 1-bed wards, operating room, wash room, linen room, nurses' room, diet kitchen, and toilet rooms. This pavilion is equipped with the most modern appliances. The female members of the families of the officers and enlisted men are treated in this pavilion.

The central power plant furnishes power to all the mechanical equipment, including the refrigeration and ice-making machinery, laundry and shop machinery, and heat and light for the entire group of buildings. The building for the plant is one of the recent structures, and has been erected of brick. All the pavilions are equipped with the most modern fire protection system.

The following is a list of the medical officers of the army on duty at the hospital, giving their respective duties:

Guy L. Edie, colonel medical corps, commanding. Clarence H. Connor, captain medical corps, chief of eye, ear,

nose and throat service. John W. Hanner, captain medical corps, chief of surgical service. Lloyd L. Smith, captain medical corps, chief of medical service. Laertus J. Owen, captain medical corps, assistant to chief of surgical service; summary court. Frank W. Weed, captain medical corps, adjutant; signal, ordnance, and recruiting officer; C. O. detach. H. C.; in charge of post schools, printing office, and dispensary; registrar of sick and wounded records; C. O. detach. of patients; officer in charge of baggage room. Henry J. Nichols, captain medical corps, chief of laboratory service; sanitary inspector. Morrison C. Stayer, captain medical corps, quartermaster; accountable officer for property of the medical department; in charge of police; officer in charge of laundry.

Wayne H. Crum, captain medical corps, mess and post exchange officer; librarian. James L. Robinson, captain medical corps, assistant to chief of surgical service. Eugene G. Northington, captain medical corps, assistant to



Fig. 11. Letterman United States Army General Hospital. Isolation ward.

chief of medical service. George H. Cassaday, first lieutenant, dental surgeon, chief of dental service. Mortimer Sanderson, first lieutenant, dental surgeon, assistant to chief of dental service.

Almost all the older hospitals of Paris were established by the kings. Down to the Revolution almost all had their independent administration, but an exception was the Hôtel Dieu, which was under the immediate protection of the kings and under the supervision of the clergy.

To obtain good drinking water is one of the most important questions for a small country hospital. In this respect the hospitals in the cities have much less difficulty, as they are usually supplied by city water works, but a country hospital must usually provide for its own supply.—Helwes.

PLUMBING AND HOT WATER SYSTEMS FOR HOSPITALS

Expensive Fixtures Not Always Most Appropriate—Piping Must Be Carefully Selected—Overheating Water Is Waste of Fuel—Polished Metal Uncared for Gives Untidy Appearance

By FRANK SUTTON, C. E., NEW YORK

THE plumbing and drainage system of a hospital is probably one of the most important adjuncts to the equipment, and therefore the system to be installed and the types of fixtures to be selected should be considered with extreme care. The tendency in a great many instances, from the writer's observation, is that the type of fixtures selected, while very useful, at the same time is too elaborate and too costly, whereas there are other articles on the market that will answer the same purpose and give good results.

In the design of a plumbing and drainage system for a hospital the question of sewage disposal is, of course, of vital importance, and, if the hospital is not so situated that the sewage can run into some public sewer, the only alternative is some form of sewage disposal system. This particular branch of the subject is so large and varied that a special article could be written on the different forms of systems that could be employed. In this article it will be well, therefore, to simply take up the question of the internal arrangement of the building.

There are two forms of systems that can be used—that is, as far as the soil, waste, and vents are concerned—either to have the entire installation built of galvanized wrought-iron or steel pipe, or to have all vertical soil, waste, and vent lines built of cast-iron. There seems to be considerable difference of opinion as to which is the most advisable to adopt, and in a number of instances the galvanized iron is adopted, due to the fact that it takes up considerably less room, but at the same time it is more expensive. If room enough can be procured in the construction of the building, in the writer's opinion the cast-iron system is as good as, if not better than, the wrought-iron or steel, due to the fact that cast-iron is practically indestructible, whereas wrought-iron or steel, due to the action of the sewage, will eventually eat out, and a new system will have to be installed. The only precaution in installing a cast-iron system is that the pipes should be put together very carefully, as lead-run joints are apt to leak, thereby causing considerable trouble.

In connection with the water supply the writer has noticed in a number of instances that there is a tendency to install water filters regardless of

the condition of the water. I do not mean to say that water filters are not useful and important, as they are most important in certain instances, but I have known cases where water has been supplied to hospitals from deep wells or from water companies where the water for twelve months in the year is absolutely clear, and no suspended matter or dirt whatsoever is apparent. The only cause for installing a water filter is its use to take out suspended matter, as water cannot be treated chemically in a water filter, and, if the water is in such condition that it should be treated to change the properties in the water chemically, a system of water treating apparatus should be installed, which in most instances is elaborate and expensive. Under the circumstances, unless the water is dirty, I cannot see the use of going to the expense of installing filters.

Another important matter which is sometimes overlooked, especially in connection with a large institution, is the supply of hot water, and in a great many cases little or no care is taken to figure out with any degree of accuracy the size of the hot water heater necessary to supply the hot water fixtures. This also applies to the question of the circulating system in order to always have hot water at the fixture, and, further, in connection with the temperature to which the water is raised. Heretofore there has been a tendency to specify a heater to heat the water from, say, 50° F. to 180°. The consequence is that the water, when it comes from the faucet, is generally so hot that it must be mixed with considerable cold water in order to be used. Just as satisfactory and more economical results can be obtained by heating the water to a temperature of, say, 120° or 125°, which is as hot as anyone can endure, thereby saving a waste which is bound to occur by mixing very hot water with cold water. This is a good point to remember in connection with the design of a hot water system.

In connection with the hot water circulation, a compact building with a number of stories would generally circulate the water by gravity, and not much trouble is experienced, but in a group of buildings the writer has noticed that the water is generated at one central point, which is the proper way to do it, but the means of circulation is generally omitted, or there is a separate hot

water tank in each building, which is entirely unnecessary and expensive. The proper way would be to generate the hot water in the main boiler room and then have the supply lines connected with a centrifugal pump, with the circulating line brought back to the pump, thereby keeping the water always in motion. If this is done, no trouble will be experienced in having hot water at the fixtures at all times.

The next question to be taken up, and one which is probably of the most importance in connection with the installation of a plumbing system, is the type and number of fixtures used. In connection with this part of the work it is customary for the architect to select a set of fixtures for the building in conjunction with some fixture manufacturer, and the tendency invariably is to select very expensive material, which in a number of instances the owners cannot really afford.

In what is known as pottery or vitreous ware, there are generally three classes of material, known as class A, B, and C—class A being material which is almost perfect; class B, material which has only slight imperfections; and class C, material which is obviously defective. There is considerable difference in price between these three materials, and, unless the work is for some particular purpose and a large amount of money can be appropriated, the class B material is, without doubt, as good and serviceable as the class A. There is another type of fixture on the market—namely, the enameled iron fixture—which is cheaper yet than the porcelain fixture, and which in a good many instances answers the purpose just as well as the porcelain. In the majority of cases this type of fixture for bath tubs and ordinary lavatories is very serviceable. Of course, when it comes to installing enameled iron slop sinks and other fixtures which are apt to be abused or put to hard usage, it is probably better to use the porcelain or vitreous ware, as eventually the enamel on the iron will crack off, thereby leaving the fixture in a very unsightly condition.

Another important matter to be taken in connection with the installation of plumbing fixtures is the type of faucets to be selected. In a great many instances, if one will go through a hospital building, he will notice that a large number of the faucets are dripping water. This is due to the fact that a faucet of inferior design and construction has been installed. There are, however, a number of good faucets on the market which will stay tight, and the architect should pay particular attention to the selection of this part of the equipment.

Another important item in connection with the

fixture is the question of traps in the waste and water supply lines directly around the fixtures. Heretofore there has been a tendency to use a great deal of polished metal, which, when first installed, looks very nice, but if it is not constantly kept polished, will soon give the whole hospital a very untidy aspect. Due to the great expenses in operating a hospital, it is next to impossible to keep a corps of cleaners busy on a large number of fixtures, and it seems to the writer that it would be considerably better if most of this material, instead of being nickel-plated, were rough brass and most of it painted. In this way there is absolutely no care attached to it, and, if the paint wears off, it is a very simple matter to give the pipes another coat of paint.

There are other equipments that should receive careful attention—namely, the main kitchen equipment, serving pantries, diet kitchens, laundries, both in the wash room and in the ironing rooms, but these questions will be taken up in later articles.

In connection with the direct plumbing work which has been considered in this article, the principal items to be considered are the use of water filters, care in the design of the domestic hot water supply, and care in the selection of fixtures.

The Financing of Hospitals

Some day someone will devise a better way of financing hospitals than money raising campaigns. If hospitals are necessary, and they are, then everyone should contribute to their support. The destitute stranger suddenly stricken upon our streets cannot be permitted to remain where he falls. He is taken to a hospital. On whom is that man a charge? On a few generous and charitably inclined people? Not at all. He is properly a charge on the community. Under the present system this man contributes to our hospitals while his neighbor declines to contribute. And yet both have equal responsibilities.

Our present system is largely the result of an ancient but mistaken view. The ideal of individual responsibility is very old. We have not been quick to learn, however, that communities have certain responsibilities that they should discharge. Maintaining hospitals is one of them. We clean the streets at the expense of the general public. We treat the destitute sick at hospitals maintained by means of funds a few people have furnished. It would be just as reasonable to finance our street cleaning department by means of a financial campaign as it is to depend on popular subscriptions to maintain our hospitals. Of course until we get some better way of handling the problem, financial campaigns must be relied on to meet the community needs as far as hospitals are concerned. But, just the same, it is as much the duty of everyone to help support hospitals as it is to compel everybody to help support the schools.—Editorial in Johnstown (Pa.) Democrat.

The Cleveland (O.) public welfare director is urging an appropriation to double the capacity of the city's tuberculosis sanatorium at Warrensville, O. The institution is now caring for 243 patients and has a large waiting list.

PRIVATE ROOM BUILDING OF THE ROBERT PACKER HOSPITAL

Sayre, Pa., a City of Only Eight Thousand People, Can Boast of One of the Most Serviceable Institutions in the Country—The Architecture of the New Pavilion—Some Details in the Organization of the Staff

BY ORNAN H. WALTZ, OF GIBB & WALTZ, ARCHITECTS, ITHACA, N. Y., AND DONALD GUTHRIE, M. D.,
CHIEF OF STAFF

THE Robert Packer Hospital has approximately 9½ acres of land, with a small park on the east and the Episcopal parish playground on the south. The land is practically level in front and slopes slightly to the rear. The original building was the Robert Packer residence, to which was added, as the hospital grew, one-story frame and brick buildings for wards, private rooms, dispensary, operating rooms, and kitchen department, with connecting corridors, and also a two-story nurses' home.

It is planned to gradually replace the present buildings, of frame construction, with two- and three-story buildings of more modern fireproof construction. This will be done from time to time as the hospital finds the means at its disposal.

On account of the growth of the hospital it was found necessary to have immediately additional room for private patients. This fireproof private room building is now under construction, and when completed will increase the capacity to 200 beds. The building is located on sloping ground 63 feet west of the women's building. The sloping ground made it ideal to place the first floor about 6 feet below the other first floors and still give a basement completely above ground on two sides. The basement and first and second floors are connected to the women's building by ramps in the connecting corridor. Off from this connecting corridor are an inclosed ward porch at the first floor level and an open loggia at the basement level. The roof of the building is flat and covered with inlaid slate, and has parapet walls, railings, and a stairway, so that it can be used for convalescent patients. In addition to the inclines or ramps, the basement, first and second floors, and roof are connected by an inclosed fireproof staircase.

The first and second floors contain twenty-four private rooms, one three-bed ward, delivery room, nursery, nursery wash room, two solaria, diet kitchens, utility rooms, bath rooms, linen closets, cleaners' closets with hoppers, and nurses' chart and medicine rooms.

On each of these floors two suites have connecting baths, with private toilet rooms. In the basement are located an isolation department consisting of four rooms and baths and an outside entrance, five orderlies' rooms and bath, store

rooms, laboratory, and an autopsy room for the entire hospital, and also machine room. There is a separate outside entrance for the orderlies.

The foundations are of reinforced concrete, and the walls above are all hollow terra cotta, faced on the outside with brick to match the children's ward and operating pavilion. The outside trimmings are of Indiana stone. Floor construction is of the floored dome type of reinforced concrete. The walls and ceilings are plastered two coats, and the bases of all rooms and corridors are to be 6 inches high, of terrazzo and coved out onto the floor. The bath rooms, toilets, utility rooms, and diet kitchens have terrazzo tile floors, and the solaria have tile floors. All other rooms and corridors have heavy battleship linoleum floors.

All room doors throughout are flush veneer oak, 4 feet wide, and have wood transoms above. Doors to stairways are of metal, to match the wood doors. Windows in private rooms have double slide sash, with transoms above. The windows in solaria, connecting corridors, and ward porch have casement sash, with transoms above.

The heating is the one-pipe vacuum system, with a supply pipe running to a distributing pipe duct above the second story corridor ceiling. Each room is lighted by an indirect ceiling fixture, and has side wall plugs about 6 feet above the floor for portable side light fixtures. All rooms and the solaria have silent call signaling systems and telephone connections. Each corridor has two lines of fire hose inclosed in enameled steel cabinets. Cupboards in the pantries are of wood. Bed-pan warmers in utility rooms are set flush with the wall and are of enameled steel. The finish and doors of bath rooms, toilets, utility rooms, and diet kitchens are white enameled, and all other wood finish and doors are oak.

MEDICAL STAFF ORGANIZATION

The organization of the staff of the Robert Packer Hospital has been planned along lines that will give the patients the benefit of a group diagnosis.

The staff is composed of surgeons, diagnosticians, a pathologist, a röntgenologist, and an ophthalmologist. These men are residents in the hospital, and devote all their time to the work



Fig. 1.

except when their services are called for in consultation. No private practice is carried on by any of them.

The staff has associated with them several younger men in the community in the role of clinical assistants, who are following up such lines of work as pediatrics and orthopedics. These men are engaged in private practice.

Patients coming for consultation have, first, a careful history taken by one of the clinical assistants, and are referred to the different men for what examinations are thought necessary for a diagnosis; for example, an eye-ground or antrum illumination, a Wassermann test or blood count, x-ray or cystoscopic examination, etc. After the results of the different ex-



Fig. 2.



Fig. 3.

Robert Packer Hospital. Fig. 1—Operating room; note absence of furniture and businesslike appearance. Fig. 2—Exterior of hospital from southeast; note the beautiful lawn at extreme left, with women's and children's buildings nestling among trees. Fig. 3—Women's ward in one of the old buildings.

aminations are all turned in, the case is then sent to one of the surgeons, who agrees or disagrees with the diagnosis. If the case is found to be a chronic one of the medical type, it is referred at once to the patient's home physician, with the results of the examinations, and with suggestions as to the future care of the patient, should the examinations disclose anything that had not been previously found in the case. All surgical or acute medical cases are advised to stay in the hospital. By

this arrangement patients from all classes can be given the benefit of the different opinions of men following special lines of work. In former days this privilege was open only to the very rich or to the very poor in the larger cities. The charity cases in the larger hospitals were

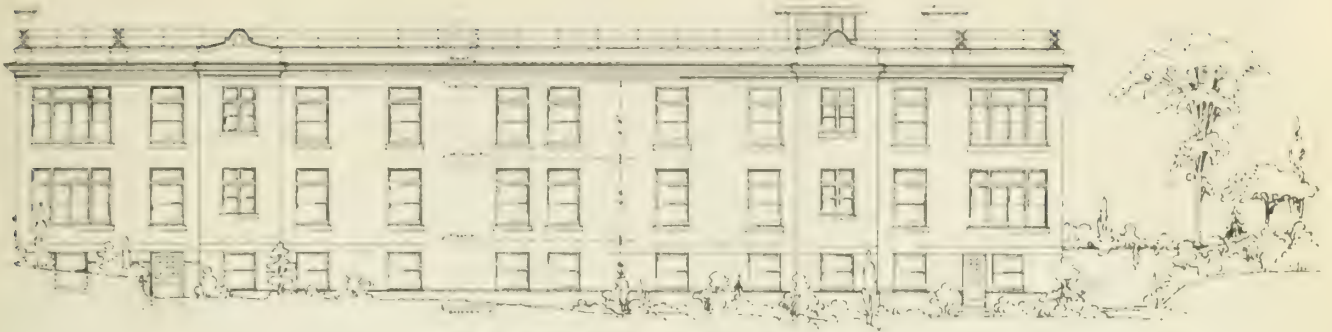


Fig. 8. Robert Packer Hospital. West elevation.



Fig. 9. Robert Packer Hospital. South elevation. Note dotted ramps to main building.

gone over in this manner, as were those who had the means to pay, but the man of a moderate salary was denied this opportunity because of the expense which such examinations would incur. By having a staff work together in the same building like this hospital, examinations can be made for a reasonable charge, which can be met by a patient in very moderate circumstances. Nothing, of course, is asked of those patients whose circumstances will not make it possible for them to pay without hardship, but a charge is made to people in good circumstances, and it is made equivalent to that which would be made by specialists in the larger cities. This plan seems to be the one that will be employed in the future in the smaller communities.

Already groups of men are associating themselves together and are working in consulting offices, using some one hospital to take care of their patients. The reading public knows that obscure cases in medicine and surgery cannot be diagnosed without the services of specialists, and the men in general practice have already realized this fact.

Misbranding of Diabetic Foods

A diabetic patient who uses ordinary food products can easily avoid those containing a surplus of starch and sugar, as the chemical composition of ordinary foods is usually well known, but in the case of a prepared food advertised for exclusive use in the treatment of diabetes the patient may be misled into using large and injurious quantities of starch and sugar.

The Department of Agriculture has recently conducted a series of analyses and investigations on diabetic foods

in order to protect the public from misbranded products. It was shown conclusively that many of the so-called diabetic foods contain as much starch and sugar as ordinary products. Many of these are, therefore, of no use in the treatment of diabetes, and are liable to cause extra difficulties, as they only add fuel to the flames.

The Department of Agriculture has ruled that a diabetic food may not contain more than one-half as much carbohydrates as a normal food of the same class, and that the label must not give the impression that an unlimited quantity of it is suitable for the diabetic patient. It is to be hoped that this ruling will result in the elimination of many fake foods that in the past have been a large factor in the disappointing results obtained in diabetic treatment.

IOWA'S COUNTY HOSPITALS

An Editor Who Was Lukewarm Now Urges More of Them

Keokuk county, Iowa, will vote at the November election on a proposition to build a \$25,000 county hospital at Sigourney, the county seat, and, in view of the fact that one of the first county hospitals to be built in Iowa was located at Washington, the following comment from the *Washington Democrat* is interesting:

"We note from the *Sigourney Review* that there is a movement on foot for a county hospital, and we want to urge on the people of our neighboring county the good of such an institution. We have a right to say things for the county hospital, because we were not always so dead sure that it was a good thing. When our people first talked of a hospital we were not enthusiastic about it, as it seemed perhaps more a fad than a necessity. We voted for it, but did it perfunctorily, because of the habit of being 'for' things rather than against them. But we ought to have been for it stronger than horseradish, because it has been the best investment Washington county ever made. We believe every room is full right now, and we honestly believe that a good many lives have been saved and cripples avoided because they had treatment right at hand. By all means, we think Keokuk county ought to vote favorably on a county hospital."

THE SMALL COMMUNITY HOSPITAL—THE PLANNING

The Survey of the Community—Classes of Patients to Be Cared for—Size of the Hospital—Architectural Division by Sexes and Diseases—The Administrative Space—The Operating Suite.

BY JOHN ALLAN HORNSBY, M. D., CHICAGO

PAPER III

EACH community has a problem of its own when it approaches the subject of a community hospital, and before any material move is made, excepting the collection of funds and the organization of a temporary board, something of a survey of the community ought to be made to determine the size and character and limitations of the hospital, not only in the first unit to be built, but through a period far into the future. And this survey is practically no different from a survey of that same community that might be made by a business man who was thinking of erecting a store or engaging in any other commercial enterprise. A merchant, thinking about settling there, would want to use his very best judgment as to the future of the town and the surrounding country. He would want to make some calculations as to the character of the future population as well as the present in so far as its spending capacity was concerned. In other words, a store that he would think about opening in a community that was to be made up of the working classes would be far different from that in a summer resort community made up of well-to-do people on an outing, or a suburban city whose population was largely made up of wealthy people who could afford to live out of the nearby metropolis. In the one place he would think about carrying a stock that would be popular with the working classes, and in the other cases he would think about catering to people who had money to spend for fads and fancies.

In this sort of survey, then, we ought to draw out something of the future of the town, and whether it is likely to grow, and in what directions, not only geographically, but socially and financially. If we have a town that we think has reached its limitations of growth and is to go along in a humdrum sort of way at about the size it now is, then we would think about building a hospital all at once to meet the needs of that small town; but if our survey into the future impresses us with the notion that the town is to grow rapidly, then we should plan for the first unit of a hospital that can be added to from time to time without disturbing the homogeneity and workableness of the institution from the standpoint of economy and efficiency.

Another valuable point in this survey is to determine the probability of our hospital becoming popular outside the narrow limits of the town, and receiving the patronage of the surrounding country; and this part of the survey is really an estimate of the medical profession in the town. If there are wide-awake, well-educated, active, and aggressive medical men in the community—men who would, if they had an opportunity, grow by study and work—then, it seems, we should have an asset, in sizing up our hospital situation, that ought to be taken into account; because there are very many cases of disease that cannot be considered emergency, and such cases could be taken to a distant city and cared for by skilled physicians. If our own physicians seem to promise, by their enterprising character, that they can attract this class of patients from the surrounding country, then, in determining the size and character of the hospital, we must take this sort of service into account and provide facilities for these men.

The distance to other hospitals in the surrounding country is an important factor—the distance to the nearest metropolis and the character of the transportation facilities to such distant hospitals. The habit of the people of leaning on these other cities and their hospitals is important.

But, over and above all this, the community spirit of the people is to be taken into account. If there is a disposition on the part of the citizens to look elsewhere for whatever they need, if they have no community pride, and if their residence is an enforced one, so to speak, for financial or business reasons, with their minds ever turning to the day in the future when they may move away, that must be taken into account, because in such a community the people will patronize their home hospital only when they are obliged to, and will go elsewhere when they can. A town of a thousand people made up of citizens who have civic pride is worth more as a hospital asset than a town of ten times the number that is made up of people who have no ties in common and no community interests.

Judging, therefore, somewhat after these formulas as to the likelihood of the future growth of the community, and therefore the future prosperity of the community hospital, we will arrive

at the size of the institution we want to build, gauged, also, of course, by the amount of money available for the purpose.

The next thing to determine is the class of patients we expect to take care of, and it goes without saying that in such a hospital as we are thinking about all the sick and hurt of the community must be taken care of, whether the patient be white or black, adult or child, male or female, and no matter what the disease may be—one of the exanthemata, tuberculosis, child-bed fever, erysipelas, or the diseases that come inside the regular services of medicine, surgery, obstetrics, and the specialties, such as ear, nose and throat, mental diseases, or what not. This means that the hospital must be intensely flexible, and must be able to take care at any time of any kind of case that offers itself. But there are some rather fundamental principles and figures that we have to think about in making up a schedule of the percentage of beds for the various classes of patients; for instance, more men go to the hospital when they are sick than women or children, because it is difficult for the mother of the family to take care of her household duties and the children and at the same time nurse the husband, and a grown man is generally too heavy for a lone woman to handle. Moreover, the household is a little less disturbed by the absence of the man during a period of illness than in the case of the wife and mother. The wife and mother puts off going to a hospital until the last moment, and generally will consent to go only under the greatest pressure of the medical attendant and when told that it is absolutely necessary. That spirit is changing somewhat, but it is still there. Women allow their children to go to the hospital with great reluctance; they have a notion that it is almost abandonment for them to send a sick child away. This idea, too, is passing, but it is there, and in a country town or rural community it is far easier to take care of a sick child in the home than in a tenement district of a metropolis, because there are kind neighbors in the country and in the country town, and because there is plenty of fresh air and sunshine, and at least for sickness there is fresh milk, fresh eggs, and whatever the sick child may need, and the neighbors all flock in to help, so that country doctors are very much less likely to order a sick country child into the hospital than is the case in the tenement district of a large city.

Medical cases can be taken care of in the home better than surgical cases because less technical knowledge is needed, and the mother or wife can usually nurse a sick man where she would not be able to make anything of a surgical dressing; and

the same is true, of course, with women and children who need surgical attention. In a good many hospitals more than half the cases are surgery—for this reason and even in a country hospital it seems that nearly half the beds will usually be occupied by surgical cases.

There ought to be a few obstetrical beds, and, if there is a good obstetrician or a physician in whom the women have confidence in that direction, and if the new hospital shall provide correct methods for the care of maternity women, it is very likely that this service will grow rapidly; in some communities it is almost the habit of women to go to the hospital at their lying-in time. This means a labor room, at least one private room for the new mother to lie in quiet for the first twenty-four or forty-eight hours after the birth of her baby, and it means two or three beds in a ward for convalescent maternity cases.

The rest of the hospital should be so constructed architecturally that most of the beds can be separated from all other patients, even though this separation shall involve the making of very small rooms. Certain eye cases need to be in a dark place, and will not bear the light of the medical or surgical ward; choreas in children need to be isolated from the other children. This isolation can be by high screens if necessary, but at least some provision must be made for it. There should be one or two beds so arranged that mental cases can be temporarily cared for until they can be properly sent to institutions specially designed for them. Any private room whose windows can be barred and doors locked will do for these cases, and this same room will do very nicely to take care of an occasional tuberculosis until some other provision can be made for it. The acute infections, especially the communicable infections, constitute a problem of their own, but, if it is intended that the administration of the new hospital shall be up to the modern mark, this problem will not be difficult of solution. In a large hospital where there are many communicable diseases, the problem of isolation is a difficult one because of the great amount of time involved and the technic necessary, but in a small country hospital that is not likely to have to entertain many of these communicable infections, almost any room will do for them, providing, of course, attention is strictly paid in the administration to the principles of asepsis; but it is far better to have one or two rooms capable of pretty strict physical isolation, and, if these rooms have an opening to the outside in addition to the one on the common corridor, it will not be difficult to care for even smallpox or diphtheria in them.

Let us take, for instance, a 25-bed hospital and

see what we can do about these various services. In the average American rural community with a hospital in its midst, in a town of, say, 3,000 people, it would seem that there ought to be one male surgical ward of, say, four beds and a smaller female surgical ward to take care of, say, two patients. There ought to be two medical wards of approximately the same size, an obstetrical ward of, say, three beds, a children's ward of, say, three beds, and, say, seven private rooms, some of these at least arranged so that they can be pretty well cut off from the rest of the house.

In addition to these rooms for patients, there must be the so-called service rooms, and the number of these and their size will depend a good deal on whether the hospital is one story or two; in the latter case it will be necessary to duplicate somewhat. For instance, if the main kitchen is on the first floor and part of the patients are on the first floor, the main kitchen will probably answer for a diet kitchen, but there should be a small service kitchen upstairs. There will have to be small utility rooms, one on each floor, in which the equipment would be hot and cold water, a slop sink, an instrument sterilizer, and a shelf for bed pans, urinals, and the rubber goods. A general linen closet would be necessary on the first floor and a smaller one upstairs. The medicines can be distributed from the drug room on the main floor, and this need not be a large room. There should be somewhere an x-ray room of pretty large size because, even though there is no money for an x-ray plant at the present moment, the money will come soon from some unexpected source. There will have to be an office somewhere near the main entrance of the hospital, and a room for the doctors where they can deposit their outer garments, use the telephone, and have consultations. There will need to be a waiting room, and this ought to be somewhere near the front entrance.

There must be a kitchen, with store room, of course, and a dining room. If there can be two dining rooms, one for officers and the nurses and one for the downstairs help, it will be all the better. These dining rooms need not be large, but they ought to be convenient to the kitchen. There should be one room set apart for apparatus and appliances of various sorts—splints, a stretcher, a wheel chair or two, back rests and head rests, and such devices. Then, if possible, there should be another room for surgical supplies, including instruments, dressings, and the stores of gloves, rubber goods, catgut, syringes, and the like. Some of these rooms will do very nicely on the basement floor, provided there can be areaways on the outside, so that large windows can be had. The

kitchen, the dining rooms, the x-ray room, the drug room, and the kitchen store room will do well on the basement floor.

Then there is the surgical operating department, and no pressure for space and no attempt to economize financially should interfere with the correct, however modest, arrangement of the operating department. There need be only one operating room, but there should also be a dressing room somewhere in which minor surgery can be done and in which dressings can be applied, and which can be used, in an emergency, for more serious surgery. Some small hospitals think it is quite sufficient if they have an operating room without any auxiliaries, but this is not enough; the nurses and doctors may scrub up together if economy of space presses, and it is possible to keep the instruments, surgical dressings, anesthetic apparatus, etc., in this room, although it is not advisable to do so. The instrument case ought, in reality, to be in a room without flowing water, because in no other way can they be kept dry and free from rust. There must be some place for making up the drum materials, cleaning the gloves, and preparing the sponges. There should be a small anesthetic room, and this room should have running hot and cold water, and be equipped with a cabinet containing the anesthetic material—ether, chloroform, the masks, etc.—and at the bottom of this cabinet the nitrous oxid and oxygen tanks can be kept. In this room the patient is prepared, shaved, scrubbed, and the field painted; there is a good deal of psychology in this room, because the severity of the operating room can be overcome by having the patient introduced, while awake, to the anesthetic room only, where he or she will see none of the "awful instruments" of surgery.

We need not go into lighting and heating, and ventilation and vacuum cleaning, because these things do not differ in a small hospital from like equipment in a large institution—at least the principles underlying their installations are the same; but there is something to be said about the power plant for a small hospital. It will hardly pay to install a complete power plant in a community hospital of the size and limitations we are thinking about, but there must be a hot water or steam heating system, and this means boilers, preferably two small ones rather than one large one, because occasionally a boiler will get out of commission and it is well to have a substitute. There can also be operated in this plant a small high-pressure boiler that will take care of the sterilization for the hospital, the coffee and tea urns, and the vegetable cookers. If we attempt to furnish our own lights from such a plant as

this, we at once embark on a much more complicated enterprise, and it would seem that the best plan is to buy lighting for a hospital of this size from the public service corporation.

We can conceive a situation in which it would be advisable to have in connection with such a power plant a small ice-making machine that would furnish refrigeration for the kitchen refrigerator and for perhaps one other refrigerator upstairs. It is possible now to buy ice machines of very small units, economical in practice, simple to operate, and profitable in their results—and certainly conducive to comfort and convenience.

Then there is the laundry to think about. The laundry for a 25-bed hospital need not be large. It ought to be prepared to launder at least 500 pieces per day, and it ought to be equipped up to this amount; if possible, the space allotted to the laundry should be much more than necessary for this equipment in order that additional machines may be added with the growth of the institution.

In this discussion we have been thinking about a completed hospital for 25 beds. If it has been decided that the prospective growth of the town

will warrant additions and expansion presently, then the architecture of the institution must be predicated on that fact, and consideration must be given to service accommodations for a much larger institution, but it will not be necessary to waste space. We can, in the first unit, so build the hospital that some areas eventually intended for administration purposes can be used to accommodate patients' beds, the intention being to make slight alterations in these areas when additional building enterprises are under way, and these spaces may then be used for administration.

Each community can take its own problem separately, and from the above suggestions easily figure out the number of cubic feet in the building that it will need, always presupposing that beds should occupy 6-foot centers; in other words, the bed is 3 feet wide, and there should be at least 3 feet between the beds and 3 feet between the end beds and the wall, and there should be at least 800 cubic feet of space in each room for each bed. In private rooms, especially if they are not very well ventilated, there should be more air space than this—1,000 or 1,200 feet.

CANNED VEGETABLES—FOOD VALUE AND TRADE METHODS¹

Methods of Canning—Sizes of Cans—Their Contents in Nutrition—Consumers Are Warned Against Trusting to Appearances Alone—Names of Manufacturers Mean Much

BY JOHN PHILLIPS STREET, CONNECTICUT AGRICULTURAL EXPERIMENT STATION, NEW HAVEN, CONN.

THE development of the canning industry marks an important step in the conservation of our food resources. While most of us prefer the fresh vegetables to even the finest canned product, these fresh vegetables are not obtainable at all times of the year even to the possessor of a plethoric purse. In times of abundance the canner packs his product, and thus saves from waste tons of useful food products which cater to our wants in the cold, unproductive winter period, and thus supplies wholesome, succulent food which would otherwise be denied us.

The progress of the industry was slow and marked with many failures in its earlier years. The causes of the decomposition of food were but poorly understood, and methods for preventing this spoilage were inadequate and not at all times successful. In the earlier days of the canning industry, bottles and earthenware jars were commonly employed. These containers were unsatisfactory both from their relative costliness and from the ease with which they were broken dur-

ing transportation or sale. Accordingly the use of tin for this purpose by Durand in 1810 made a decided forward step. But here again expense was an important factor, as the first tin cans were made entirely by hand, the only tools being a pair of scissors and a soldering iron. One hundred cans a day were deemed a large daily output for a single workman. Later the stamped can with extension edges was introduced, with the subsequent improvement of the pressed top. Still later inside soldering was superseded by lock seams and outside soldering, and even this improvement gave way to the can with the open top, the so-called sanitary can, in which the sealing is done by double seaming on the tops, no solder being used except in the side seam. The objections to acid and solder were thus largely overcome. The most modern improvement in the tin can is the enameling or lacquering of the inside with various coatings. This process has not yet been worked out to complete perfection in all of its details, but it offers even in its present stage great advantages with certain fruits and vegetables which tend to attack the tin coating and thus cause a loss in

¹Next month Mr. Street's paper will be on the subject of Canned Fruits, one of the most important food problems in the hospital.

flavor, quality, and appearance, besides forming objectionable tin salts. The lacquered can finds its most advantageous use with products like raspberries, cherries, plums, beets, pumpkin, and hominy. Its use is not indicated for such vegetables as corn, peas, beans, and tomatoes, whose juices have but little action on the tin.

The meaning of can sizes has often been a source of confusion to the consumer. In the past, when he purchased a can of peas or corn marked "2," unless he were particularly intelligent, he believed he was getting two pounds of the vegetable, whereas in fact only 20 to 22 ounces were received. To the trade, Nos. 1, 2, 2½, or 3 refer to cans of definite measurements, and are standardized within quite narrow limits. The net weight requirement of national and state laws will do much to remove any misunderstanding, provided, of course, that the consumer will take the pains to read the label. The consumer, however, must clearly understand the limitations of the information thus afforded. Most canned vegetables and fruits are and must be packed with more or less water, which is either natural to the product or is directly added. The weight of a can of vegetables, therefore, gives no information as to the quality of the vegetables or the relative amounts of solid and liquid contained in the can. One can may show a greater net weight than another, and yet contain actually less of the vegetable or fruit in question. The statement of net weight conveys no further information than the amount of material, both solid and liquid, in the can. The writer has found, for instance, in the case of peas, two brands which had about the same net weight, yet one supplied 16 ounces of drained peas and the other only 10.9 ounces, or, in other words, a little more than one-fourth of the contents of one can was water and almost half the contents of the other.

The label of the can of vegetables is not always as informing as it should be. The great difficulty lies in the confusion among the canners themselves as to the significance of the terms of quality they employ. Such terms as "extra select," "extra choice," "extra fancy," "select," "choice," "fancy," "extra standard," and "standard" are commonly found on the can label. It may be quite clear to any one manufacturer what these terms mean as applied to his particular product, but the "select" or "fancy" of one canner may be quite a different grade from that of one of his competitors. Furthermore, his grades may vary with the season, as drought, excessive rain, or heat affect the quality of the vegetable. Under present conditions the only safe course for the consumer to take is to buy his canned vege-

tables strictly by brand name. A little experience will teach him which manufacturer's product best suits his wants and his taste, and then, if he follows the rational practice of ordering a can of "Smith's Peas" or "Jones' Corn" instead of a "can of peas" or a "can of corn," satisfactory results will generally follow.

In using canned vegetables, their relatively low food value must not be overlooked. They are not a form of concentrated food, as water makes up from 75 to 95 percent of their weight, and in the more watery products there is not room for any considerable amount of nutriment. The table below shows the average composition of the principal varieties of canned vegetables. It will be seen that baked beans, lima beans, kidney beans, corn, succotash, and sweet potatoes yield from 77 to 177 calories per 100 grams of material, while asparagus, artichokes, string beans, brussels sprouts, okra, and tomatoes yield only from 18 to 24 calories. The latter cannot be recommended for the nutriment they contain, but they do have value from their succulence, their flavor, and the organic acids and mineral salts they contain. Tomatoes, especially, while being quite low in nutriment value, have a distinct value for flavoring and garnishing purposes in the preparation of a long list of attractive and appetizing dishes.

CANNED VEGETABLES¹

Vegetable	Water	Ash	Protein (Nx 6.25)	Fiber	Nitrogen- free extract	Fat	Calories per 100 grams
Artichokes	92.5	1.7	0.8	0.6	4.4	...	23
Asparagus	94.4	1.2	1.5	0.5	2.3	0.1	18
Beans, baked	68.9	2.1	6.9	2.5	17.1	2.5	129
Beans, string	93.7	1.3	1.1	0.5	3.3	0.1	21
Beans, lima	79.5	1.6	4.0	1.2	13.4	0.3	77
Beans, kidney	72.7	1.6	7.0	1.2	17.3	0.2	104
Brussels sprouts	93.7	1.3	1.5	0.5	2.9	0.1	21
Corn	76.1	0.9	2.8	0.8	18.2	1.2	98
Macedonie (mixed vegetables)	93.1	1.0	1.4	0.6	3.9	...	24
Okra	94.4	1.2	0.7	0.7	2.9	0.1	18
Peas	85.3	1.1	3.6	1.2	8.6	0.2	55
Potatoes, sweet	52.2	1.1	1.9	0.8	40.6	0.4	177
Pumpkin	91.6	0.7	0.8	1.1	5.6	0.2	32
Squash	87.6	0.5	0.9	0.7	9.8	0.5	50
Succotash	75.9	0.9	3.6	0.9	17.7	1.0	98
Tomatoes	94.0	0.6	1.2	0.5	3.5	0.2	24

¹Atwater and Bryant—Chemical Composition of American Food Materials, 1899, p. 69.

When everything is considered, the cost of canned vegetables is, as a rule, not excessive when compared with that of the fresh product. In many instances the vegetable packed is much fresher than the "fresh" vegetable obtainable in season in most of our large cities. Corn and peas, for instance, deteriorate in quality very quickly after picking, and here the canner has the great advantage of being able to pack promptly crops especially grown for him, and thus retain in great measure the flavor and quality of the

fresh vegetable. Many brands of canned vegetables, however, are, of course, relatively expensive, but it is not always so much the fault of the canner as of the foolish and overexacting purchaser. If the consumer will insist that every pea and bean and every grain of corn shall be of approximately the same size, he must expect to pay the canner an increased price for the necessary selection and separation of these products. On the other hand, if he is willing to make some sacrifice of appearance and will accept the "field run," which lacks the uniformity of the fancy article, he will secure quite as much nutriment in just as palatable form, and certainly at a much lower price. The consumer who insists on "petits pois" ("little peas") naturally must pay a higher price for them, for less than 5 percent of peas run that size, and at the same time he is buying peas which lack the flavor and nutriment of the larger peas, which cost only about one-third as much.

In the purchase of canned peas the consumer should learn the significance of the terms indicating trade sizes as applied to the vegetable itself. These are petits pois, extra sifted, sifted, early June, marrowfat, and telephone, and have no reference to the variety of pea used or to the time of picking, but exclusively to the size of the peas, ranging from less than $9/32$ of an inch in the case of petits pois to over $13/32$ of an inch in the case of telephones. As already stated, the smaller and more tender peas are much more expensive than the larger grades, such as marrowfats and telephones, and contain much less nutriment. For instance, in an examination of a large number of samples made by the writer it was shown that a can of marrowfat peas supplies 385 calories and a can of petits pois only 157; furthermore, the former shows an average cost of 11 cents per can, the latter 19 cents per can, making the cost per 100 calories in marrowfat peas 2.9 cents, while in petits pois it is 12.1 cents, or over four times as much.

Similarly in 1912 the writer showed the great variations in the cost of canned tomatoes. These are filled into the cans either by hand or by machine. The cans filled full of whole tomatoes by hand are known as "hand packed" or "solid packed," as distinguished from those filled by machine, or filled with a mixture of whole tomatoes and added juice. In machine-packed tomatoes the fruit is naturally more or less broken, thus affecting the appearance, but not the quality, of the product. It was found that in No. 3 cans, the standard size for tomatoes, the pulp ranged from 264 to 541 grams, the juice from 408 to 682 grams, and the percent of juice from 43 to 72. Of these samples 4 contained from 43 to 50 percent of

juice, 15 from 52 to 60, 6 from 61 to 64, and 2 over 70 percent. The cost per can ranged from 9 to 15 cents, the cost per pound of dry matter from 75 cents to \$1.86, and the cost per pound of tomatoes of average water content from 4.8 to 11.9 cents. In two samples, packed in glass for fancy trade, the cost per pound of dry matter was \$2.45 and \$3.61. It is apparent from the above that in many cases the consumer pays extremely high prices for supposed high quality, which all too often is a matter of mere appearance and not of nutriment supplied.

The usefulness of canned vegetables to the American public is unquestioned. It is equally evident, however, that the consumer, intent on purchasing palatable nutriment at the lowest cost, should not be led astray by assumed standards of quality based more on the appearance of the food than on its nutriment value. The composition of canned vegetables, even of the same manufacture, varies from year to year, and tables of analyses are at best but an imperfect guide. The consumer should appreciate the importance of brand names with this class of products, and, as said before, when he finds a manufacturer supplying a brand that meets his wants, he should give his allegiance to that brand until it is found wanting, which in the case of the better class of manufacturers will be rare indeed.

In a French War Hospital

The following vivid description of the scene at a French hospital where wounded soldiers were being received is contained in an article by Henry Sheahan in the August *Atlantic*:

"The chateau had been a hospital since the beginning of the war. A heavy smell of ether and iodoform lay about it, mixed with the smell of the war; for the war has an unmistakable odor of its own—a compounded odor of humanity, wet cloth, horses, leather, mud, smoke, and chemicals; a smell that clings to everything military, fills the troop trains and encampments, and saturates one's own clothing. This effluvia of an army, mixed with the sharper reek of anesthetics, was the atmosphere of the hospital. The great rush of wounded had begun. Every few minutes the ambulance slopped down a miry byway, and turned in the gates; tired, putty-faced hospital attendants took out the stretchers and the nouveaux clients; mussed bundles of blue rags and bloody blankets turned into human beings; an overworked, nervous medicine chef shouted contradictory orders at the brancardiers, and passed into real crises of hysterical rage. 'Avancez!' he would scream at the bewildered chauffeurs of the ambulances; and an instant later, 'Reculez! Reculez!'

"The wounded in the stretchers, strewn along the edges of the driveway, raised patient, tired eyes at his snarling. Another doctor, a little bearded man wearing a white apron and the red velvet kepi of an army physician, questioned each batch of new arrivals. Deep lines of fatigue had traced themselves under his kindly eyes; his thin face had a dreadful color. Some of the wounded had turned their eyes from the sun; others, too weak to move, lay stonily blinking. Almost expressionless, silent, they resigned themselves to the attendants as if these men were the deaf ministers of some inexorable power."

St. Francis Hospital, San Francisco, is being enlarged.

THE VALUE OF EMPLOYEES' MEDICAL AND SOCIAL SERVICE DEPARTMENTS

How the Firm of Ed. V. Price & Co. Has Improved the Working Conditions of Its Employees—Medical Service and Social Advantages Important Factors in Maintaining Efficiency—Home Conditions Also Receive Attention—Provisions for the Care of the Sick

By MISS AGNES P. McCLEERY, CHICAGO

THE movement toward the development of the medical and advisory departments in our large mercantile houses is one of the most significant advances in preventive medicine. The effort on the part of employers to better, both socially and physically, the condition of their employees is in part an altruistic movement, although the majority of firms disclaim any such motive and simply hold that this work is an active and potent instrument in the upbuilding of an efficient and healthy working force.

During the past few years a number of Chicago firms have organized medical and social service departments, after which other firms have patterned their medical departments. After all, the problem is a varied one, each line of business having its particular needs and each employing a different class of employees, so that at best each line of business is studying its own situation carefully, and working out slowly and systematically a helpful line of medical and hygienic supervision.

The firm of Ed. V. Price & Co., Chicago, was the first of the men's clothing manufacturers to introduce a systematic medical examination of its employees.

This company, employing 1,800 foreign- and American-born men and women, developed rapidly from the old system of having scattered work shops in various parts of the city to a large central plant, consisting of two large modern fire-proof buildings, models of sanitation in every respect. One building has been so constructed that each of the eight floors is supplied with an abundance of light from three sides, and the workers are so placed that their work is executed without eye strain. The ventilation of each floor is constantly supervised and under strict regulations.

Drinking fountains are used throughout the house. Sanitary soap and individual towels are furnished to all employees. The work rooms are swept every night and scrubbed once a week.

The working day for employees is a very reasonable one, forty-eight hours constituting a full week's work. Time and one-half is paid for all overtime work and full pay for seven holidays during the year. The firm's policy is to provide not only a liberal wage, but recognition and advancement of the efficient, skillful, and faithful employee.

Several years ago this firm employed a non-graduate nurse to care for those who were taken suddenly ill or to give first aid in minor injuries. With the organization of its medical department a graduate nurse has been employed, one who has been trained both in medical and sociological fields. The firm believes that the efficiency of the employee is not only lessened by his own illness, but it has found that, particularly among the women employees, sickness in the home was a frequent cause of absence from work or inefficient work when present. The firm has, therefore, arranged to supply free of charge in cases of sickness the counsel of a consulting specialist or the services of a visiting nurse to cooperate with the family physician in the home.

The company, through its medical and advisory department, endeavors to be helpful along such lines as the following:

Light and ventilation of work rooms.	Emergency hospital rooms.
Inspection of lavatories, toilets, etc.	Inspection of new employees.
Dining rooms.	Nurse's office for consultation.
Lunches sold at cost.	Annual employees' picnic.
Malted milk during working hours.	Vacation camp during summer months.
Rest rooms.	Distribution of health bulletins through pay envelopes.
Branch library.	Health lectures after working hours during dull season.
Referring patients to specialists (firm's expense).	Educational motion pictures.
Visiting nurse service (firm's expense).	
First aid.	

The office of the trained nurse is on the dining room floor, conveniently located, so that employees may confer with her during the lunch period. A cut finger is dressed, an infection is sent to a surgeon, the pale and anemic are sent to a specialist and their treatment arranged as he directs. Often a simple, constructive tonic treatment is all that is necessary, or, in more urgent conditions, a stay at the fresh air sanatorium is advised. There is also the surgical emergency service, and the hospital may be the patient's destination, followed by a carefully advised convalescence in one of the rest homes near the city.

Aside from the medical work which the nurse is performing for the employees of the firm, and cooperating at all times with their physicians, an



Fig. 1. Ed. V. Price & Co., Chicago. One of two rest rooms.

cream, pie, cake, apples, oranges, coffee, tea, malted milk.

The dining rooms have been made attractive with canary birds and table and wall decorations. In the summer flower boxes are placed in the windows and hanging baskets suspended from the ceilings. On October 1 the leaves and flowers are changed so as to be in keeping with the fall season.

The serving of malted milk during working hours twice a day to persons below normal physically has been a very sat-

isfactory undertaking. Employees who are underweight or in need of building up their general health are given the opportunity of this arrangement.

RECREATION FOR EMPLOYEES

Adjacent to each dining room is a cozy rest room for women, where comfortable rocking chairs, settees, a modern phonograph, and reading tables, with the leading weekly and monthly publication, serve their purpose admirably.

A well-organized baseball league selected from the different departments of the two plants has been uniformed and equipped by the firm, and on Saturday afternoons during the summer months some very interesting exhibitions of the national game take place.

idea of the extent of her advisory efforts may be gained from the fact that during a period of one year she gave over 2,000 consultations to employees pertaining to their own health or to that of some member of their family. In this manner some incipient cases of tuberculosis have been discovered and brought under medical care, in some instances being sent to a sanatorium, or, if too far advanced, have been placed under proper medical supervision in their homes. A review of the figures in the yearly reports of this department shows at a glance the great value of the work toward health saving and efficiency conservation. Important have been the cultural observation of infected throats and the early recognition of scarlet fever, diphtheria, and acute cases of appendicitis. Some idea of the extent of the work of this department may be gained from the following statistics for 1915:

Office consultations.....	2,933
Dressings	741
Visiting nurse visits.....	387
Referred to specialists....	189
Vacations arranged.....	106
Health lectures given.....	35
Referred for operations...	12
Fitted for defective vision.	23

LUNCH ROOMS

In each of the large dining rooms a cafeteria lunch service is in operation, where carefully prepared food of the best quality is sold at cost. For 2 cents a portion the following can be purchased: soup, sandwiches, baked beans, ice



Fig. 2. Ed. V. Price & Co., Chicago. Room in emergency hospital.

Every summer the company gives a picnic to the employees and their families, after which a souvenir book of photographs taken at the picnic is compiled and presented to each employee. Small children are made a special feature at these

Headache

HHEADACHE is said to be the most useful pain in the world, as it is Nature's signal that something is going wrong.

It may come from several causes:

- (1) Getting overtired—especially if at the same time one is not getting enough sleep.
- (2) Bad air—sitting or sleeping in hot, stuffy rooms.
- (3) Eye strain.
- (4) Constipation or indigestion.

- (5) Or it may be the first sign of a bad cold, the beginning of a fever or other illness.

The thing to do is to find the cause and remove it.

If the cause cannot be found, a physician should be consulted.

Beware of drugs recommended by your neighbor or headache powders advertised in the newspapers!

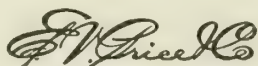


Fig. 3. Ed. V. Price & Co., Chicago. Health bulletin, size 5½ by 4½ inches, containing a few simple facts regarding health or disease, distributed once a month with the pay envelopes.

picnics in parades, games, contests, etc. The entire expense of the picnic, including transportation, is borne by the firm.

During July and August a hundred women, as guests of the senior member of the firm, are given a week's outing at Lake Bluff, Ill., in a cottage

built on the grounds of the Arden Shore Association.

CIRCULATING LIBRARY

Employees are given the advantages of the Chicago Public Library through a branch station in the house, where any book in the library may be secured. During the first thirty months after the opening of this station 8,864 books were circulated, 589 of which were requests from the employees for special books from the main library.

Back of these special aims toward social and physical improvement is a desire on the part of Ed. V. Price & Co. to have each employee increase his own earning power through a maximum degree of personal efficiency, and it is readily seen that nothing else is so conducive to better results than ideal surroundings and wholesome working conditions. These efforts cannot be construed as wholly philanthropical, but as partly a business proposition whereby each employee receives the fruit of his labors and is enabled to advance to the greatest possible extent through having no conditions to impede him, but conditions to help him.

Taken altogether, a most desirable degree of cooperation is manifest, and the employees are, in a sense, one large happy family, working together in complete harmony and with an appreciation of their employers' object to increase their efficiency. The value of this condition is apparent in their own individual and collective success.

THE WARD PATIENT AT SLOANE HOSPITAL FOR WOMEN, NEW YORK CITY

No Visiting Allowed, and Rigid Technic, Evolved After Years of Study, Is Practiced—Some of the Details in the Preparation and Labor

BY MARY E. HUTCHISON, PRINCIPAL OF TRAINING SCHOOL

AS many patients are very nervous and excited when they are admitted, one of the first duties of a nurse, in the cases of those thus affected, is to reassure them and quiet them as much as possible in order that they will have more strength to properly use their labor pains when they occur.

On admission a specimen of the urine must be obtained, one part of the urine being examined at once by the examining physician to ascertain if there is albumen present, and the other part is sent to the laboratory for more complete examination. The patient is then prepared for the vaginal examination, being placed on the examining table in the lithotomy position. The pudenda are well scrubbed with sterile green soap and then shaved, a safety razor being the most satisfactory instrument to use. After the area has been cleanly shaved, it is washed off with warm sterile water,

when the patient is ready for vaginal examination by the physician, who was notified when the patient was admitted. The physician informs the nurse in what stage of labor the patient is and whether the membranes are ruptured. If she is in the early first stage of labor and membranes are not ruptured, she may be given a tub bath, but otherwise must go to bed and be given a thorough sponge bath and have her head shampooed, using 1 ounce of 1:12 ammonia water to a pitcher of warm water, and afterwards the hair is sprayed with a disinfectant.

All patients who are not in the second stage of labor must have the bowels thoroughly emptied by giving soap and water enemas—three if necessary. If labor is long, one enema must be given every twelve hours while patient is in the labor room. The patient's bladder must also be kept

empty, and, if the patient cannot void every four hours, she should be catheterized, a rubber catheter being used.

The nurse in charge of the labor room is responsible for the care of the patient, and must carefully watch her condition, reporting to the head nurse any changes she may observe. She must especially report when the patient has "bearing down" pains, when the membranes are ruptured or any bleeding occurs, and report at once the first appearance of capita. The appearance of meconium during labor should also be reported at once, as it signifies pressure on the child.

The nurse should see that the patient is made comfortable and given light nourishment at intervals, allowing her to rest as much as possible, so that her strength will be saved for the second stage. During the first stage, if membranes are not ruptured, the patient may walk around a little, but must always wear a sterile pad. If the membranes have ruptured, she must not leave the bed, and the vulva is covered with a wet 1-1000 bichlorid towel.

When the patient enters the second stage of labor, a second stage suit is immediately put on, which consists of a short jacket and long stockings, and she is ready to be taken to the operating room at the first sight of capita. Unless the physician has recently examined the patient and informed the nurse that she is fully dilated, the only way the nurse can determine that the patient is in the second stage is by the nature of the "bearing down" pains, which become more intense, and a bulging can be felt at vagina. During the second stage the nurse must attend to the case very carefully, as capita may appear with any pain. When capita is observed, no time is to be lost in notifying the head nurse and having the patient taken into the operating room.

The operating table should always be in readiness, well protected with rubber pads, with a Kelly pad over side, the end falling into a pail on the floor. The cart is also set up for delivery and the reception of the baby and the care of the mother during and after delivery. On the cart are kept a sterile douche can, with a sterile douche tip; a jar of sterile green soap for scrubbing the patient, with a pitcher of sterile water with which to wash off; two basins of $\frac{1}{2}$ -percent lysol, with cotton balls in each; two bowls of 1:1,000 bichlorid, with two sterile towels in one and dressing in the other; two basins and two pus basins; two packages of sterile towels, and a cord set, which consists of a pair of scissors, thumb forceps, two cords, and a pledget. There should be provided also two gauze rolls for "blow-outs," a sterile binder for the baby, two small bottles of sterile saline for douches, a

jar of sterile albolene, two medicine droppers (one with boric acid solution and the other with 20-percent argyrol), a tape measure, a pelvimeter, and a stethoscope.

A labor slip, which was made out when the patient was admitted, with a record of the patient's name, number of gravida, position of child when pains began and kind of pains, time of ruptured membranes, and commencement of second stage of labor, with all examinations made by the physician and treatments and medications given, is taken into the operating room with the patient, and an additional record of the time of birth of child, weight, expression of the placenta, and anesthesia given is kept during delivery.

When the physician is scrubbed up and ready, the patient is placed in position on the table, with knees up, the pudenda are scrubbed with green soap and washed off with sterile water, and draped with sterile towels. The nurse's duties now are to hand the physician what he may need off the cart and give him any assistance he may require. After the mouth of the baby appears, which is the birth hour of the baby, the nurse follows down the fundus with her hand.

In a normal case, where the mother is in good condition, the first care is given to the baby after delivery. If the child does not breathe properly, the physician uses artificial respiration, giving even hot and cold baths and using a lungmotor if necessary. After respirations have been established and the baby has given one or two cries, it is placed on a sterile towel at the mother's feet and the cord tied and cut. If more than ordinary measures were used to make the baby cry, the cord should have been clamped and cut and then tied afterward. The baby is now well rubbed with albolene where the binder is to be placed, rubbed off with a sterile towel, and sterile dressing and a nonabsorbent gauze binder is applied. The eyes are washed with boric acid solution and two drops of 20-percent argyrol are dropped into each eye. The head measurements and length of the baby are taken and charted, and the lungs and heart are tested. The baby is wrapped in a sterile weighing blanket and weighed, a tag is pinned on the binder bearing the name, time of birth, and weight, and is then taken to the nursery, where it is well albolened, placed in warm bed, and left six hours before the bath is given.

The physician's attention is now given to the mother. Twenty minutes are allowed to elapse before the placenta is expressed after the birth of the child. During this time the nurse holds the fundus firmly with her right hand, and, if any bleeding begins, the fundus is massaged until the uterus contracts and bleeding stops. When the

placenta is expressed by the physician, he examines it to ascertain if any membrane has been left in the uterus. The patient is now washed off with $\frac{1}{2}$ -percent lysol, a wet 1:1,000 bichlorid dressing is applied, and is then transferred to the bed, with the knees kept close together. Ergot (2 drams) is usually given to prevent bleeding.

The nurse holds the fundus for one hour after the birth of the child, and after that time has elapsed she prepares the patient for conveyance to the ward. First the nipples are well cleaned with alcohol and ether, a pledget with albolene is applied to each nipple, and a snug breast binder is applied. The patient is placed on a bed pan, and, if she voids, the amount is charted. She is then washed off with $\frac{1}{2}$ -percent lysol solution, two sterile pads are attached (one absorbent and one protective), and a tight many-tailed abdominal binder is applied. After temperature, pulse, and respiration are taken and the patient's hair is combed, she is ready to be taken to the ward.

The first three days the patient is attended with four-hour dressings. These are done at 9, 1, and 5 o'clock, with the same care as was followed in the delivery room, and the amount of each voiding is carefully charted, a postpartum specimen being sent to the laboratory as soon as a clear one can be obtained. The position of the fundus is taken before and after the bladder is emptied, and this is charted, with a description of the lochia discharge. During the first two days only fluids are allowed, but on the morning of the third day the patient is given $\frac{1}{2}$ ounce castor oil in $\frac{1}{2}$ ounce cinnamon water, and a soft solid diet is then given. From the third day there is a standing order for soapsuds enema—once a day if necessary—and from the fourth day on an order for 10 grains cascara three times a day and a regular diet. No raw fruit except oranges is to be given, with plenty of milk and cereals.

The baby is brought in to nurse every six hours the first three days and every three hours thereafter. The nurse attends to the condition of the mother's nipples, and should report any soreness, when the physician will order Peru balsam or witch hazel compresses to be applied after each nursing. The nipples are washed with boric acid before the baby nurses, and after feeding they are washed again with boric acid solution; a sterile pledget with sterile albolene is applied and the breast binder is pinned snugly in place. If the nipples are very sore, the physician may order a breast shield used for nursing, and, if the breasts become hard and painful, a massage and expression may be ordered.

The patient's temperature is taken twice a day unless a subnormal temperature occurs—below 97

degrees—or a higher one than 100 degrees, when a four-hour chart is made out. On the fifth day a bath is given, when a "T" binder replaces the large binder, and by the tenth day the patient is allowed to take her own bath in bed.

Lochia rounds are made by the nurse each morning and the findings charted and the physician on his morning rounds takes the position of the fundus and examines the breasts. On the eighth day, if conditions are favorable, the physician orders the patient in a chair for one hour; on the ninth day, two hours; on the tenth day, four hours; on the eleventh day, eight hours; and on the twelfth day he allows her to have a wrapper and walk around. On the thirteenth day the patient is examined in the "final room" by the physician and the findings charted on the history sheet, and, if conditions are satisfactory and the baby is well, she is allowed to go home that afternoon, but is instructed to come to the clinic if any trouble arises.

No visitors are allowed in the wards unless in case of eclampsia, cesarean operations, or other serious condition of mother or baby.

ICE CREAM MAKING REGULATED

Bacteria, Pasteurization, Labels, Prescribed in New York Law

An important regulation affecting the manufacture of ice cream has been enacted by the New York Health Department. All manufacturers, whether within the city or outside firms who ship either the ice cream or ingredients, are affected by the following regulations:

1. Can or receptacle to be labeled.—Each can or other receptacle containing ice cream, which is used in the transportation or delivery of ice cream, shall have affixed thereto a label, on which said label the name of the manufacturer and the date and place of manufacture shall be clearly and legibly set forth.

2. Ingredients.—All ingredients used in the manufacture of ice cream, except flavors, fruits, and sweeteners, shall be pasteurized in accordance with the regulations of the Board of Health governing the pasteurization of milk and cream, or subjected to a temperature of 212 degrees Fahrenheit for not less than two minutes.

3. Butter homogenized with milk or skim milk powder to be labeled.—Ice cream manufactured from butter homogenized with milk or skim milk powder in water shall bear a statement on the label that such ice cream has been manufactured from butter homogenized with milk or skim milk powder.

4. Excessive bacterial count.—Ice cream containing an excessive number of bacteria shall not be brought into, or held, kept, or offered for sale in, the city of New York.

5. Ice cream not to be falsely labeled.—Ice cream sold or offered for sale under a designation signifying the grade of milk or cream from which it is manufactured shall not be manufactured from any grade of milk or cream other than that designated.

6. Ice cream to be kept frozen.—Ice cream after being frozen must be kept frozen until dispensed.

THE NEW GENERAL CITY HOSPITAL, AURORA, ILLINOIS

**Five-Story Building for Ninety Patients, Costing Twenty-Seven and One-Half Cents Per Cubic Foot, Intended to Meet All Modern Requirements—
Each Floor Practically Independent**

BY NETTIE B. JORDAN, SUPERINTENDENT, AND R. S. SHEPARDSON, AURORA, ILL., ARCHITECT

THE Aurora Hospital Association was organized and incorporated in 1886 by a few public-spirited citizens, who at that time built a two-story and basement brick hospital, to which additions and alterations have been made from time to time. The old building was designed and constructed in what was at that time considered by those in charge as good architecture. But things have changed; ideas that were considered good then are now obsolete, and the people have realized for some time that a modern building should be erected to take its place — a building more conveniently arranged and having greater capacity for patients. Aurora has upward of 40,000 people, besides a large territory surrounding it, from which to draw hospital patients.

Instead of erecting a new building on the site of the old one, it was decided to purchase adjoining property. This plan had two advantages—the hospital work could be continued without interruption, and at some future time the old building could be converted into a home for nurses, who at present are compelled to live in neighboring private residences. A campaign was instituted to raise the necessary funds, and \$115,000 was subscribed in amounts ranging from 10 cents to \$6,000. There were 5,200 pledges, making an average amount per pledge of \$22.11. As this was to be the people's hospital, made possible by everyone interested, subscriptions were welcomed from everyone without regard to religious or fraternal affiliation, or nationality. Many of the rooms were

furnished complete by families, individuals, clubs, and societies.

The excavation and foundation to grade were let as a separate contract, and work was started in the fall of 1913, but the general contract was not let until some nine months later, when the work started in earnest, and now the new building is occupied, a period of a little more than two years having passed since the campaign for raising the necessary funds started. The hospital is located in the residence district on high, dry ground, with a gravel subsoil, and is about one mile from the business center. It is a building 50 feet wide at the north and 44 feet wide at the south end, and 125 feet long. The main axis is nearly northwest and southeast, giving ideal orientation.

It is a five-story structure, the ground or first floor being but 3 feet below



Fig. 1. Aurora City Hospital. Rear elevation.

the finished grade of the lot. On the roof is a solarium and roof garden for convalescents. The materials used in the exterior construction are rough texture brick of brownish red color, with terra cotta and Bedford stone trim. The interior partitions are of hollow tile, plastered, and the floors are of hollow tile and reinforced concrete beams, this construction making a fireproof building. The main entrance to the building is near the north end, and is protected from the weather by a classical portico of Bedford stone in the Doric. The rear entrance is a grade entrance to the stairway going from the basement to the solarium on the roof. Just south of the rear entrance is the

ambulance entrance, which connects with the elevator; by this arrangement a patient may be brought to the building on a stretcher and taken to any part of the building while still on the stretcher.

Each floor is divided into two parts by a corridor running the full length of the building, with



Fig. 2. Aurora City Hospital. Corridor from the rotunda.

rooms for various purposes on either side. The first floor is given to the kitchen, boilers, nurses' dining room, laboratory, x-ray, emergency operating, and detention rooms, store rooms, etc. The second floor contains the office, superintendent's apartments, diet kitchen, duty room, linen room, toilet rooms, and private rooms for patients. The third floor is similar to the first, except that the north end is taken up by wards, pus room, and children's department; this floor will be devoted to the care of women and children. The fourth floor is used exclusively for maternity work, having an operating room, lying-in room, nursery, and rooms for patients. The fifth and top floor contains the two main operating rooms, anesthetizing room, sterilizing room, doctors' scrub room, waiting room, service rooms, and rooms for ward and single patients; this floor is devoted to surgical cases and the men's department. This arrangement makes each floor a complete hospital in itself.

There are eight private single rooms, with private bath attached, twenty-one rooms without bath, four 2-bed wards, two 4-bed wards, three 5-bed wards, a children's ward accommodating eight patients, and a nursery having at present twenty bassinets, but with room for ten more babies. This makes a hospital sufficiently large to care for ninety patients of all ages.

DETAILS ABOUT THE NEW BUILDING

The main stairway and wainscoting at the main entrance are of Italian marble. All corridors, diet kitchens, toilets, operating rooms, scrub rooms, waiting rooms, etc., have mosaic tile floors.

Down the center of each corridor is a strip of linoleum 3 feet wide, which prevents noise, and also makes it much easier for those constantly walking back and forth through the corridors. All rooms for the sick have linoleum flooring of a blue mottled pattern cemented to the concrete construction. The linoleum of this color does not show dust as easily as a plain color. The windows swing out and turn over, making them easy to wash from the inside, and, when both are open wide, the full size of the window frame is available for ventilation. The toilets, kitchens, and duty rooms have a ventilating system, operated by a fan on the roof, drawing air from the rooms through metal ducts. The doors are of birch mahogany stained and of flush sanitary design, without panels. All wood trim is enameled white, while the walls are enameled an ivory color. The electric fixtures and the bedside tables, etc., are finished in the same tint. The operating rooms have white enameled walls and ceilings above a 6-feet high white glass wainscoting. Where the walls join the floors a sanitary cove is used. Where wall joins wall and walls join ceiling is a



Fig. 3. Aurora City Hospital. Operating room.

cove to make easy cleaning. The lighting of all rooms is by indirect electric fixtures, excepting the operating rooms, which have the Bartlett no-shadow fixtures.

In the boiler room are two cast-iron down-draft boilers, each of a capacity for 5,000 square feet of radiation; a garbage burner and water heater for the hot water supply of the building, and a high-pressure boiler to furnish steam to the sterilizers and for cooking in the kitchen. The heating is a

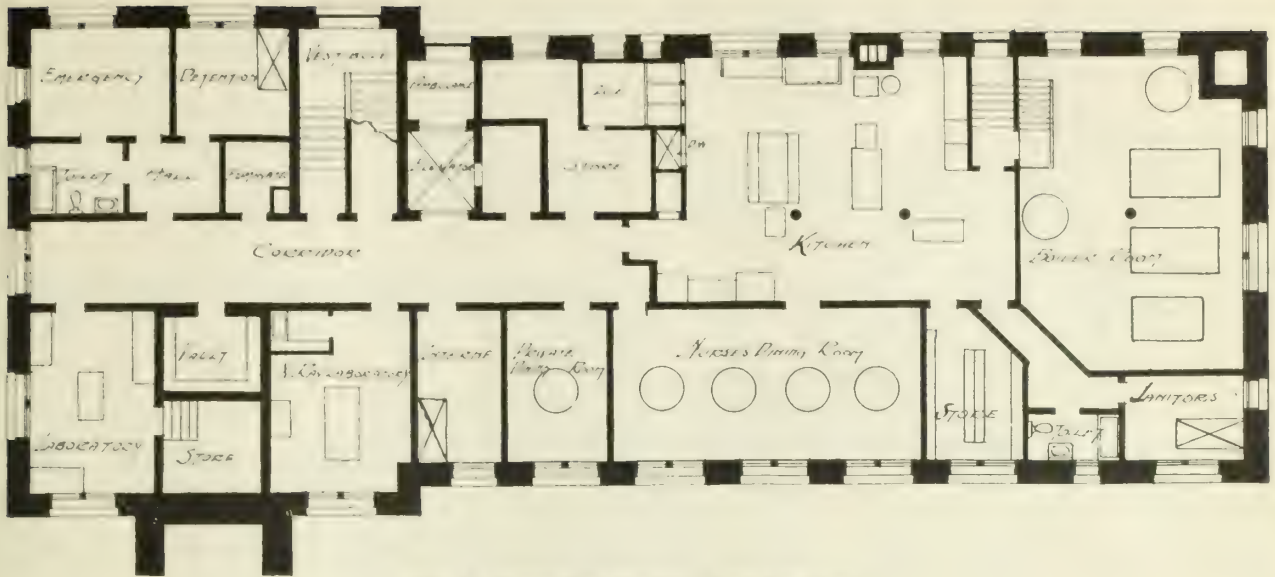


Fig. 4. Aurora City Hospital. First floor plan.

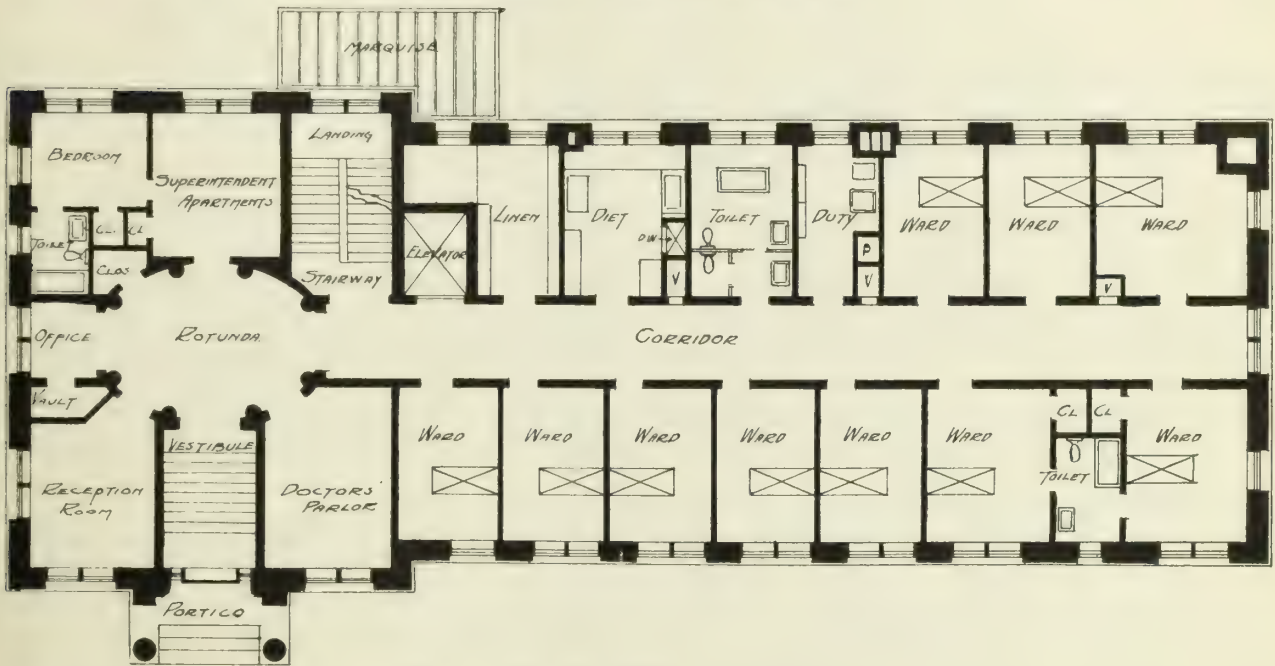


Fig. 5. Aurora City Hospital. Second floor plan.

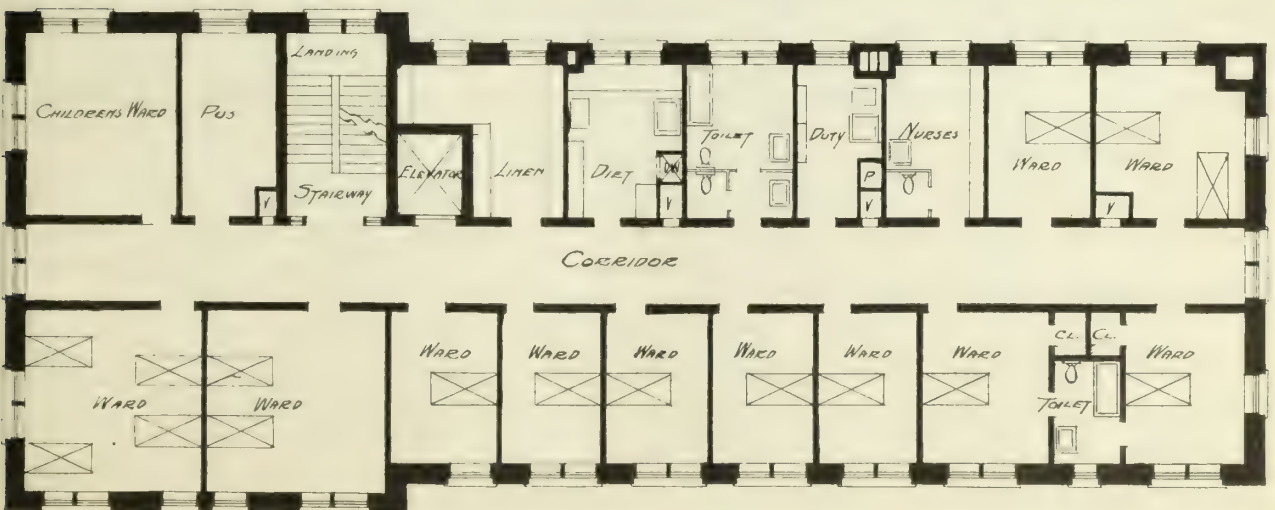


Fig. 6. Aurora City Hospital. Third floor plan.

vapor vacuum system, with radiators suspended on the wall free from the floors. The plumbing fixtures and sterilizers are suspended from the walls as far as possible.

The elevator and dumbwaiter are full size automatic electric machines. Each machine may be summoned or sent to any floor from any floor.

connected with long-distance telephone service through the switchboard in the office.

Regarding the furnishings for the new hospital, there is absolute uniformity, and simplicity as well as elegance, in all private rooms; square dressers of various woods, with small tables to match, each having glass tops, brown leather easy

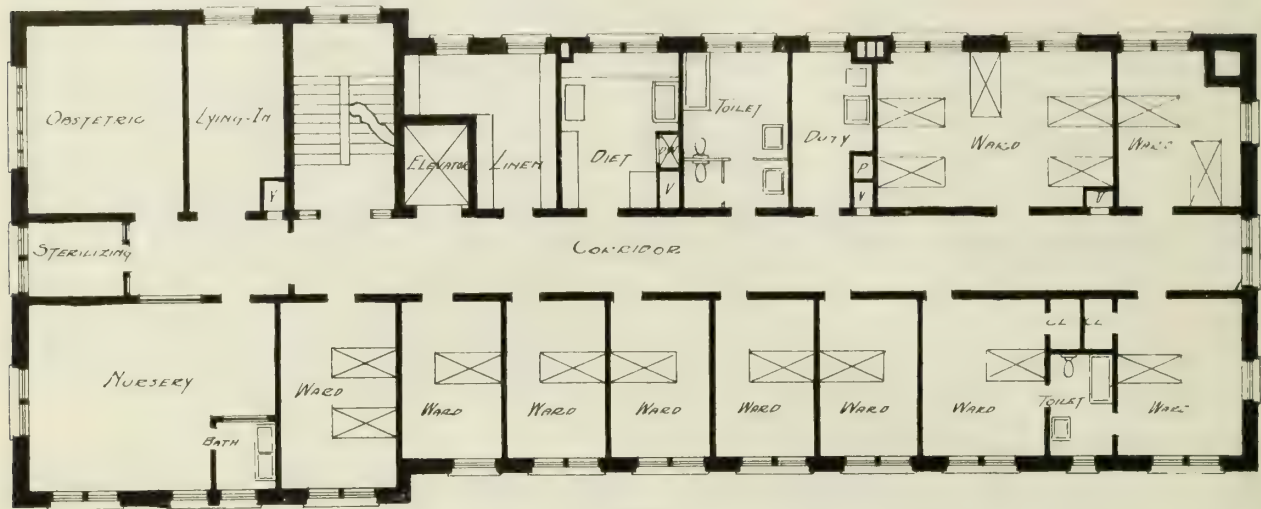


Fig. 7. Aurora City Hospital. Fourth floor plan.

Throughout a special design of steel lockers, cupboards, etc., is used, best fitting the place for its work. The nurses' signal is a silent electric system; when the patient presses a button at his bedside, notice is registered by an electric light at the head of the bed, in the corridor just outside the patient's room, at the floor nurse's desk in the corridor, and at the main office. These signals

chairs with foot rests, and grained steel cabinets for clothing. Private donations for room furnishings were received at \$200 for most of the rooms and \$300 for the better ones. As to dishes, each floor has a distinct pattern on the dishes, so that all dishes may be sent to the main kitchen, cleaned in the dishwasher, and returned to the proper floor diet kitchen without extra work as to

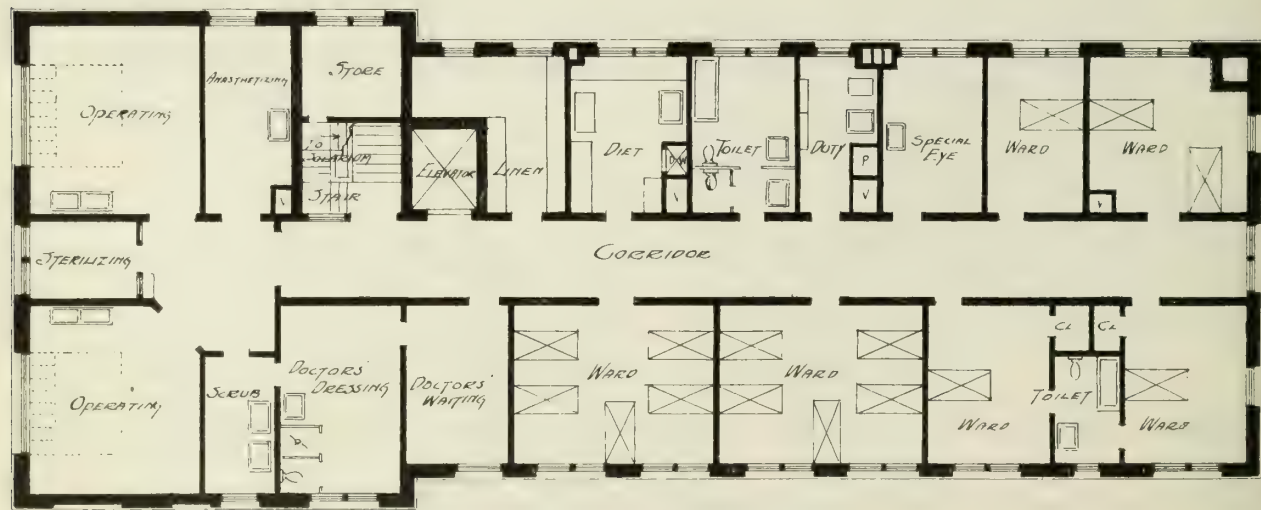


Fig. 8. Aurora City Hospital. Fifth floor plan.

all remain on until the nurse answering the call releases the switch at the patient's bed. The building is equipped with a twelve-station intercommunicating telephone, the stations being placed at the important places throughout the various floors; also each floor nurse and each private room is

counting and keeping a record as to the floor from which they came. All dishes of a certain pattern are sent to the floor where that pattern belongs. The linen is standard, and will not be kept distinct for any room.

When it shall be deemed necessary to enlarge

the building, this may be done by adding to the south end whatever is required, as the administration service and operating parts are adequate for the addition of many more rooms for patients.

The following is a fair statement of the costs of the various parts entering into the complete building ready for business:

Excavation and foundation.....	\$ 3,400
General contract on building.....	65,500
Plumbing	9,500
Heating and ventilating.....	10,600
Tile floors and marble work.....	5,100
Elevator and dumbwaiter.....	3,900
Hardware	1,000
Vault doors	100
Shades	200
Window screens	700
Electric fixtures	1,000
Refrigerators	1,175
Total.....	\$102,175

The total cost of the building, \$102,175, makes

a cubic-foot cost of 27.4 cents and a per-bed cost for ninety beds for all ages of \$1,135.35.

For equipping the building the following are approximately the amounts:

Metal cabinets, cupboards, etc.....	\$ 2,750
Kitchen equipment	1,500
X-ray equipment	1,500
Sterilizers and special equipment.....	4,000
Instruments, etc.	1,100
Furnishing rooms (including donations from individuals, societies, and clubs), linen, dishes, etc.....	9,000
Total.....	\$19,850

This makes a total cost for building and equipment of \$122,025, which does not include the architects' fees for plans and superintendence. The building as it now stands shows the combined work and effort of the hospital board, the building committee, the doctors' staff, the nurses, the architects, and the people, and we as a community feel proud of our accomplishment.

EFFICIENT HEATING FOR INSTITUTIONAL GROUPS

Hot Water Compared With Steam—Former Claimed to Have Many Advantages, Including Economy in Operation, Better Control, Greater Simplicity—Longer Life of the Plant and More Healthful

By ALBERT L. BAUM, M. E., MEMBER OF JAROS & BAUM, CONSULTING ENGINEERS, NEW YORK

THE historians of ancient Greece tell us that when a baby was born which was crippled or presented indications of growing up weak-bodied, the child was carried out to the mountains by its parents and left there, to be devoured by the wolves. Our ideas of humanity have progressed considerably since then. We no longer regard feebleness of body as a curse punishable with death; we think of it, rather, as a terrible misfortune, and strive to the best of our ability to minimize the suffering it causes, and, where possible, alleviate it and prevent its spread. The last twenty years have seen an enormous increase in the number of institutions of all kinds for the welfare of mankind. While many of these institutions have been the result of private funds, the community as a whole is beginning to realize the responsibilities which devolve on it, and is learning that more good can be accomplished by its efforts, since the expense for such welfare work does not fall so heavily on single individuals. Whether the community or the individual is to bear the expense, every effort should be made to get the most out of the money spent by designing and constructing buildings and equipment that will give the best service, and will contribute to the comfort and well-being of the inmates, attendants, and officers as much as possible for every dollar invested. In this connection, ultimate cost (which includes the cost of operation and maintenance,

as well as first cost) is to be considered rather than the latter alone.

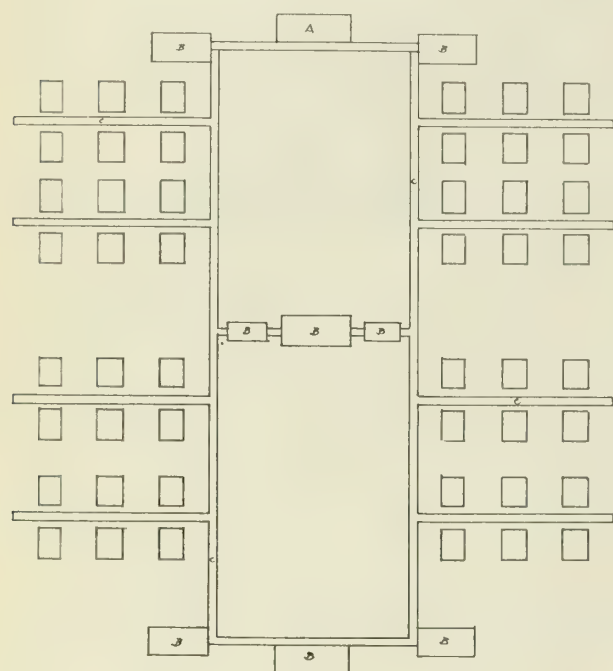
The present tendency in the design of our large institutions leans toward the village idea—i. e., a number of separate dwelling houses, interconnected by pleasant walks and passageways, and a few central buildings for service and administration purposes, the whole so arranged that it usually spreads over a considerable area. Generally speaking, sufficient funds are not at first available for the completion of the entire group of buildings as planned, but provision is usually made in such cases for future extensions and additions.

In serving such a group of buildings with heat, light, water, and power, the general aim is toward the centralization of service. The advantages of such a central plant are so well known, and have been presented so frequently, that I need not review them again. I shall take them for granted, and shall use the central plant as a starting point for this discussion of the type of heating system best adapted to such a group of buildings. It is obviously important that such a heating system be simple, reliable, and effective. Good and healthful living conditions are vitally connected with proper heating. An error in the determination of so important a feature is most serious, and likely to result in tremendous expense if a rectification of that error is to be made at a later date.

The central plant having been determined on,

the two possibilities as mediums for heating are steam and hot water. In order to more clearly understand the nature of the problem, let us consider a layout such as shown in the diagram, which represents a large institution of the hospital type, with isolated buildings. The distance from the power house to the end of the group is seen to be 2,500 feet, almost one-half mile, and institutions have been designed, such as Letchworth Village for the Feeble-minded at Thiells, N. Y., where this distance exceeds a mile.

Whether steam or forced hot water is circulated as a means of heating the buildings, some exhaust steam will be available from the engines or turbines of the central generating plant; usually, however, not nearly enough for the full heating



Block plan of institution of hospital type, with isolated pavilions. A, central boiler plant and power house; B, administration and service buildings; C, interconnecting passageways for pavilions. Distance from boiler plant (A) to farthest building (B), 2,500 feet.

load. With a back-pressure on the generating units of not more than 3 or 4 pounds, it is evident that the exhaust steam, even if enough were available, cannot be used for heating the far buildings. These, if steam heated, will have to be served with high-pressure steam, reduced in pressure at the buildings, which will at least permit the use of smaller distributing mains.

Economy demands that the condensed steam be returned to the boilers in the central plant. The facility with which this may be done with steam heat depends largely on the relative levels of the buildings. A gravity return system is by far the cheapest. If this is not possible, a vacuum return line system may sometimes be utilized. But here, again, not only are proper grades essential, but

the distance from the last buildings to the central plant must also be considered. A last resort for getting back the heating returns (where relative levels forbid the use of either of the foregoing methods) is the system of pumping, and this means a number of return pumps scattered over the property, which must be provided with power, either steam or electric, and which also demand frequent attention both as to operation and maintenance. Such an arrangement materially decreases the advantages of the central heating plant.

Hot water as a heating medium, however, is not subject to such great restrictions. The water can be pumped regardless of grade, so long as proper provisions are made for relieving the entrained air from all high points where it may otherwise accumulate and cause air-binding of the mains. The water is heated in the central plant, easily utilizing (with a medium back-pressure) exhaust steam, which, as steam, could not be made to reach the farthest buildings. In plants of this kind the heating load is usually much larger than the power load. Under such conditions all the exhaust steam available during most of the heating season can be used directly for the hot water heating equipment; furthermore, the water of condensation is immediately regained without the slightest inconvenience. By no other distributing system can the heat be distributed with such little difficulty.

It is at once evident what a great advantage is effected by the central control of the hot water heating system. The operating engineer can at all times watch the temperature of the outgoing water, and vary it to suit varying weather conditions. During very severe weather the water may readily be heated as high as 200° F. (or even a little higher), thus giving out a large quantity of heat from the radiators and stacks in the buildings. As the weather becomes milder, the water temperature is reduced accordingly, thus cutting down the amount of heat supplied to each room in proportion to the decreased demands of the outside weather conditions.

With steam heat, overheating of the rooms is almost unavoidable, since the steam temperature in the radiators is nearly constant, regardless of weather conditions. The method usually followed in practice to avoid overheating in mild weather when a little heat is still required is to open the windows; this means, in effect, dumping out of the windows the equivalent of a large part of the coal consumed. One method of saving much of this waste is to use thermostatic control in all of the scattered buildings; but thermostats are delicate instruments, and are also expensive, both to

install and to operate. Tampering with them does them no good, and, where it is desired to make simplicity the keynote of design and operation, delicate instruments, scattered all over the buildings, should be avoided. Another method of effecting coal economy is the use of a vacuum-return or open-return line system, with fractional steam control, and automatic return valves on the radiators. But the necessary appliances are expensive to install, involve care and maintenance, and require the frequent manipulation of hand valves all over the institution.

The hot water heating system, on the other hand, by its variation of water temperature avoids the need of thermostatic or other scattered means for controlling the temperature of the rooms. It therefore eliminates from the buildings all mechanical devices, with the exception of one or two automatic air traps in each building and a hand valve (which need rarely be touched) on each radiator. By means of this central control, and its ability at all times to avoid overheating the buildings, the forced hot water heating system secures the maximum of fuel economy with the minimum of mechanical elaboration and of attendance.

Besides avoiding the loss due to overheating of the rooms, as just explained, the hot water system has considerably smaller radiation losses from the distributing mains than any of the steam systems. With the forced hot water system the maximum losses from this cause occur in the coldest weather, when the maximum water temperature is carried. As the weather becomes milder, the water temperature is lowered, and this in turn decreases the radiation losses from the mains. Steam, however, does not recognize changes in the weather. Whether the rooms are controlled by thermostats or by hand, or by open windows, the heating mains carry the steam continuously at a high temperature, since the temperature and pressure of steam are related by physical laws beyond the control of man. Hence the radiation losses, instead of becoming materially less in mild weather, as is the case with hot water, remain fairly constant throughout the heating season. The excess of these losses in the steam plant over those in the hot water plant for the same particular group of buildings may easily amount to several hundred tons of coal per year, depending on the size of the institution and the distance apart of the buildings.

The foregoing considerations have been presented from the point of view of operating costs. Coincident with operation are the costs of maintenance. The greatest part by far of the heating equipment of a large group of buildings on a widely extended area is the piping connecting all

the heating surfaces with the source of heat in the central plant. In the steam heating system this entire network of piping carries during the heating season a mixture of steam, air, and moisture, while during the summer it remains dry and empty. With the forced hot water heating system the piping can remain at all times filled with water, from which practically all dissolved air has been expelled. It has long been known that piping does not rust out nearly as rapidly while it remains filled with such water as when in contact alternately with air and moisture. This gives the hot water system the advantage of much longer life, and longer life means a cheaper maintenance and depreciation charge, as well as less trouble from repairs.

There is still another phase of this question which, from a physician's point of view, should be important—namely, the health aspect of heating systems. Investigations have shown that particles of dust (largely organic matter) carried in the air begin to “burn” or decompose at about 165° F., and, since the temperature of the steam-heated radiator is always much higher than 165° F., it is at once evident what is taking place in a hospital ward heated by such radiators. The consistently lower temperature of the hot water radiators avoids in almost all cases this irritating annoyance from decomposing dust. It therefore secures a heating effect which is at once the more healthful of the two possibilities, and also affords a much more even temperature in the rooms due to the much lower intensity of radiation from the lower temperature radiators.

The only statement that can be made against a forced hot water system in favor of a steam heating plant for a group of buildings as herein shown is a possible slightly increased first cost of the hot water system. As opposed to this, however, are (1) the advantages of central control of the heat, (2) the simplicity of installation and operation, (3) the economy effected by avoiding overheating of buildings, (4) the economy effected by decreased radiation from the heating mains, (5) the longer life of the heating equipment, and (6) the more healthful character and more even distribution of the heat in the rooms, all of which go very far toward making forced hot water the ideal heating medium in a plant which proposes to be an effective and economic investment for the community as owner.

In a recent address before the Tri-State Conference of Charities in Boston, Dr. Frankwood E. Williams recommended the examination of children in their school days for hereditary diseases as a means of checking insanity. “Many bright, intelligent children in the adolescent period go suddenly insane through no fault of their own and with no hope of being cured,” he said.



The MODERN HOSPITAL

Editorial Office . . . 6 North Michigan Ave., Chicago
Business Office . . . Metropolitan Building, St. Louis

EDITORS.

Henry M. Hurd Fidelity Building, Baltimore
Frederic A. Washburn . . Mass. General Hospital, Boston
Winford H. Smith . . Johns Hopkins Hospital, Baltimore
S. S. Goldwater Mt. Sinai Hospital, New York
W. L. Babcock Grace Hospital, Detroit
John A. Hornsby . . . 6 North Michigan Ave., Chicago

SUBSCRIPTION.

Under domestic postage, \$3.00; foreign postage, \$3.50 (14 Shillings). Single copies 35 cents.

Domestic rates include United States, Cuba, Mexico, Porto Rico, Canal Zone, Hawaii and Philippines.

Contributors, subscribers, and readers will find important information on advertising page 34.

Real Public Health Service

Periodically we feel like alluding to and growing enthusiastic over one of the most brilliant pieces of public health service that we have ever known. We refer to the control by the United States Public Health Service of the bubonic plague situation in New Orleans.

Some two years ago, it will be remembered, there were eighteen or twenty cases, very close together, of bubonic plague in our southernmost city, most of which terminated fatally. In any other circumstances this would have been a quarantinable epidemic, and would have given rise to most acute alarm throughout the United States and indeed throughout the world. A high wall would have been built about New Orleans, constructively speaking, and intercourse with the rest of the world would have been prohibited, or put under such restrictions as to shut the people of that city off from social or commercial intercourse with the rest of the country. Immediately when this epidemic gave its first signs, the Public Health Service stepped in; that mere fact quieted whatever alarm may have started, and the justification for the country's entire confidence in that service is shown by what has transpired since. Not one single individual has had his freedom interfered with, not a steamer and not a train have been delayed or put out of service. The city of

New Orleans has had as free communication with the rest of the country as any other city, and yet an immense amount of work has been done. The last human case of bubonic plague occurred in September, 1915, but only last week two rodent cases were confirmed. Intensive trapping of rodents and rat-proofing of dwellings was instituted in the neighborhood of their occurrence.

Since the first human case occurred in New Orleans two years ago, 795,186 rodents have been captured, of which 7,223 were captured during the week ending August 5, 1916. Down to date, 122,281 buildings in New Orleans have been rat-proofed. This is a record that needs no adjectives to describe.

Enlightened Medical Leadership

It seems discouraging that in this day of aggressive, preventive-administrative medicine the recognized medical organizations of the country are not in the forefront of leadership. Taking the country over, when we find that something notable has been achieved somewhere in the interest of the health and welfare of the people, it is a remarkable fact that almost never is the movement led by a medical organization, whereas it would seem that if any class of people should accept such leadership, it is the organizations of doctors.

A notable exception to this rule is the Public Health Committee of the New York Academy of Medicine, which for the last five years has rendered signal service to the health interests of the metropolitan community. This committee is composed of twenty public-spirited physicians who rank very high in their profession. By persistent devotion to the task they set for themselves, they have made the New York Academy of Medicine a potent factor in the health interests of the city, and because of the high character of the work the names of the academy and of the committee have become known all over the country. Reports of the committee on the various phases of public health are being read with interest in many other municipalities.

Among the numerous achievements of the committee, a few may be mentioned in this connection. They have called into life the Associated Out-Patient Clinics of the city of New York and the Health Federation of the city of New York; they have exercised a great influence in the reorganization of the health department of the city, which, under the leadership of Dr. S. S. Goldwater, a graduate of the committee, has become one of the best in the country; they have been instrumental in bringing about the transfer of the quarantine station at the port of New York from state to

federal control; to their efforts the increase in efficiency of the municipal hospitals of the city has been due in a large measure; and the city authorities have constantly availed themselves of the expert services of the committee for advice in medico-economic and medico-social matters, as well as in the preparation of the budget insofar as it relates to hospitals and public health matters.

By their work they have set an example for the medical bodies of other cities in the country, and have also set an example of high-minded citizenship and devotion to the cause of social progress.

The work was started five years ago, and two-thirds of the expenses of the committee have been borne by Mrs. E. H. Harriman. It is to be hoped that the body will some day receive a large endowment in order that it may further enlarge its field of activity and to put it on a permanent basis.

The Philadelphia Meeting

Elsewhere in this issue will be found a pretty full account of the coming meeting of the American Hospital Association at Philadelphia.

There are to be some radical changes from former years. Among other things, we are to have a social program in consonance with the expressed wishes of the association in the form of a resolution at the San Francisco meeting. It seems that the Philadelphia people are to outdo themselves in making the visit of those attending the convention pleasant as well as profitable. There is to be a reception, a banquet, a ride on the famous river, a theater party, a luncheon at the good old Pennsylvania hospital by courtesy of Mr. Test, the superintendent.

A committee made up of eighty hospital people of Philadelphia is to act as an entertainment and reception committee, visitors are to be met at the trains, and every hour of their stay in Philadelphia promises to be full of interest.

The complete program of the sessions is published also in this issue. A glance over its contents is sufficient evidence of its invaluable character. The participants are men and women famous in hospital work, and the topics they are to discuss are the vital issues that face the hospitals of this country at the present time.

We are wondering whether there is a hospital trustee in this country who even yet fails to realize the importance of having the executive head of his hospital attend the Philadelphia meeting. Trustees are exacting more and more of their superintendents. They are asking for elevations of standards in their hospital service; they are asking for greater economies, for a higher order of

service to the sick, for better team-work with the medical staff and the various scientific departments of their institutions.

No one person holds the key to all hospital knowledge, and good hospital practice comes only from an exchange of experience between those who are responsible for the work. Unless the hospital superintendent is sent to the Philadelphia meeting, the hospital over which he or she presides will lose that much of the great fund of experience that will be poured out so liberally at Philadelphia.

We urge, we even beg, hospital trustees throughout the United States and Canada to make provision to send their superintendents to the Philadelphia meeting. One new hint picked up from his or her association with those who will attend the meeting is likely to more than repay the expense that will be incurred, and, as a participant at the whole meeting and all the sessions, the hospital superintendent should go back home full to the brim of invaluable information and suggestions for improvement in a thousand directions.

Some very important things are coming before the convention: the question of a permanent secretary, leading, in its turn, up to broader hospital activities on the part of the association; definite work for the future; the hospitals everywhere ought to be in touch with what is going on, they ought to participate in it in order that they may add to and gain from the great fund of information that is to be in the future more than ever available for hospital executives and their boards.

Please, for the sake of your hospital, you trustees, and for the sake of the sick who are dependent on it for their restoration to health; for the sake of your hospital economies, your finances, your good housekeeping, the scientific work that you are trying to do; for the sake of your medical staff, who are entitled to the best that you and your superintendent can give to them in their arduous, exacting, and humanitarian work, please, for the sake of all these, send your superintendent to the Philadelphia meeting!

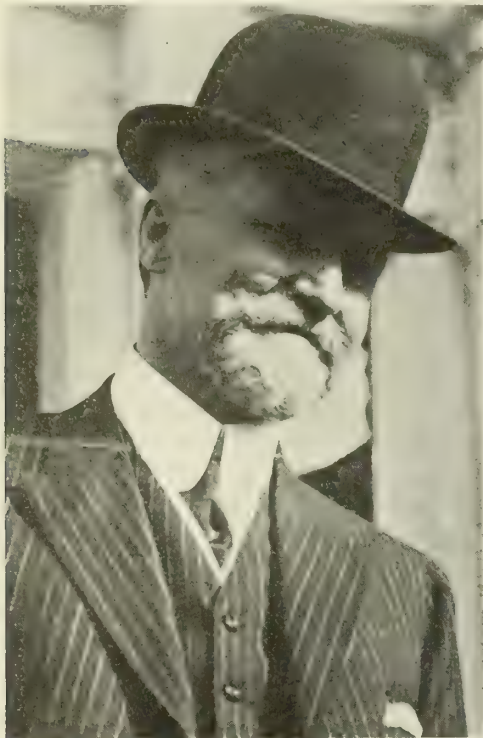
The Death of Dr. John B. Murphy

Dr. John B. Murphy, of Chicago, died on Friday, August 11, at 3:30 p. m., on Mackinac Island, where he had gone to rest, and, mourned by many thousands of people of his home city who gathered about his bier, he was laid to rest in Calvary Cemetery, Chicago, on Monday, August 14.

Dr. Murphy had suffered for a long time from a complication of diseases, which culminated in a fatal attack of angina pectoris. It was only his

indomitable energy and a feverish haste to do work he had mapped out for himself that had kept him on his feet and at work for the past four or five years. He knew that he was wearing himself out, and latterly had to leave his practice for quite long periods, but even at these times he did not rest because his talents, coupled with hard work, had opened to him secrets concerning disease, and he felt he must give them to the world while he was yet able to do the work.

Dr. Murphy was born fifty-eight years ago in a Wisconsin village, with no heritage of fame, and with no other endowment than a splendid mind in a splendid body. His early years were full of



DR. JOHN B. MURPHY.

struggles, which undoubtedly prepared him for his after life of unrelenting toil. He had seen a thousand triumphs, but he never paused, and went along his way from triumph to triumph to other work; he never spared those about him, and exacted of his associates and assistants unceasing labor, but he spared himself least of all. During his whole life he worked with a feverish haste as though he had much to do and little time in which to do it. That he did much, all the world knows, but his biographers will have difficulty in singling out the most valuable piece of work that he did.

Dr. Murphy's early work on intestinal surgery will live always. He made the operation for appendicitis almost minor surgery. Then the brain engaged his attention, and his work in that field was epochal, and the mark of it will be followed as

a guide for many years to come. He did much pioneer work on the nerves and arteries; ten years before nerve splicing and artery anastomosis had been taken up seriously in the research laboratories, Murphy had put the stamp of his own studies on that field, and the later work perfected clinical practice. Then he found that bone surgery and the surgery of the joints needed new inspiration, and that there was much to be done in that field, and all the surgical world will follow him in this branch of the science far into the future. It was in 1898 that he published his "Surgery of the Lung," which launched the memorable controversy on artificial pneumothorax. Murphy's propositions made at that time have now become standard practice. More recently he had felt that there was work to do in that large field which we commonly call rheumatism, and there is no doubt that there will be published at an early date his latest contribution to surgery in this field. But the surgeons will give him, now that he is gone, credit for brilliant leadership in many directions, and, as he was known to his assistants and associates and his friends as "the chief," so he will be known wherever surgery is known as "the chief."

There is no doubt that Dr. Murphy was many times and often misunderstood; his rarest faculty, it might be said his greatest talent, was that of leadership; the paths of others meant nothing to him, and, even when he stated a patent and old fact, it was clothed in such new garb that it seemed new. His thoughts were all along original lines; he seemed never to be able to do things along the beaten paths; he took short cuts and rose to brilliant heights where other men plodded and floundered. That was why he was misunderstood. But the great surgeons of his time will do sufficient honor to Murphy's memory as a surgeon. We wish to pay our tribute to him as the foremost advocate of good hospital service.

In the spring of 1911 Dr. Murphy sent for one of the editors of THE MODERN HOSPITAL, then at the head of a large institution, and urged the creation of a section on hospitals in the American Medical Association, of which he at that time was president, and it was through his active and aggressive leadership that that section, which had been refused a year before, was created by unanimous vote of the House of Delegates of the Association at the Los Angeles meeting. At the session of 1912, the first session of the Section on Hospitals, he made the opening address and introduced the section to the profession at Atlantic City.

A little later he urged the creation of a hospital journal, and gave his promise that if such a jour-

nal was established along lines that he had thought out, he would give it his heartiest support—morally always, and financially if necessary. THE MODERN HOSPITAL was the result, and long before the first number was published, when only in its trial form, he wrote the following letter to one of the editors:

July 21, 1913.

Dear Doctor: I received today the initial announcement of THE MODERN HOSPITAL. I wish to congratulate you on your foresight in preparing and editing a journal on this subject. There is no field in the entire range of medicine that needs standardization as much as hospital management. The waste of space, of material, dressings, drugs, etc., in hospitals is appalling, such as would bankrupt any other line of business. The treatment of and obligations to patients in many of the details of hospital work need radical reformation. These and a thousand other things need to be given close attention by hospital managements. The purchasing department and the checking department are anything but businesslike.

I feel that your journal should be in every hospital in the country and in many places in the same hospital, and that it will be the best investment that a hospital management could possibly make. Put my name down for a copy for Mercy Hospital.

With most hearty wishes for success in your undertaking, I am,

Most sincerely yours,

(Signed) J. B. MURPHY.

Later on, when committees of the American Hospital Association, the American Medical Association, and the Clinical Congress of Surgeons of North America were attempting some sort of standardization by way of inspection and marking, and when those attempts seemed almost hopeless because the hospitals themselves resented the attempts of the committees to invade their privacy, as they thought, it was Murphy who suggested that standardization should come from within and not be forced from without. The Catholic Hospital Association was the result, or at least the strong support of THE MODERN HOSPITAL to that association was given because of his insistence that the Catholic hospitals should raise their standards themselves from within.

It was Murphy who suggested the creation of hospital associations in the several states because he believed that each state was a hospital problem within itself, and that the hospitals could be rallied about a state association—if not because of altruistic sentiment, then because of self-interest.

Dr. Murphy is gone, but his spirit will continue to lead along the upward paths for many years to come, and, as he had healed the sick and the hurt to an extent rarely, if ever, achieved by any other medical man, so his work and his discoveries and his leadership will go on healing disease and preventing disease. He gave to humanity all he had to give—and it was much.

The Industrial Welfare Number

The August Industrial Welfare Number of THE MODERN HOSPITAL was a great surprise to those who had been accustomed to follow the course of events in public health and hospital work.

More than 600 industrial corporations have expressed a great interest in the subject of industrial welfare as the result of the propaganda set in motion by THE MODERN HOSPITAL. We have heard from hundreds of corporations since the August number was issued, and have received many congratulatory messages; also many inquiries that seem to presage that the corporations are thinking along some new channels and are asking themselves many sane and sensible questions about the directions of their own work.

As we announced in the July and again in the August number, we are to continue a regular department of Industrial Welfare, and we offer the services of THE MODERN HOSPITAL in all of its departments to help corporations solve any of their welfare or health problems. No trouble will be too great for the organization of THE MODERN HOSPITAL to take, and we will feel abundantly repaid if we shall be able to help, in ever so small a degree, to something like settled standards of industrial welfare.

In the meantime one of the problems mooted in the August number, and more especially in the Welfare Department of this issue, by the surgeon-general of the public health service of the Government, concerns a better designation of that which we have come by common consent to call "welfare service"—exceptions are taken to the phrase. General Blue suggests a new name, and we shall be glad to hear from the corporations on this point and to have suggestions from them as to what this new thing shall be called.

We shall be glad also to hear from the corporations on any other subject concerning health activities for their employees. We invite the corporations and the workers to use the columns of THE MODERN HOSPITAL to discuss their viewpoints concerning this, one of the most interesting, attractive, and necessary fields of the social life of our time.

Among the Christian emperors, Justinianus (527-567) showed the greatest zeal for the establishment of benevolent institutions. In conjunction with his wife Theodora he founded in Constantinople and on the road to Jerusalem a number of xenodochia, and bestowed on all these establishments the legal rights of church institutions.—J. Marcuse.

Contract has been awarded for a new men's ward at the Wyoming State Hospital for the Insane at Evanston.

AMERICAN HOSPITAL ASSOCIATION MEETING AT PHILADELPHIA

Eighteenth Annual Conference of the Association to Be Held at the Bellevue-Stratford Hotel, Philadelphia, September 26-29—Plans for the Convention and Comment on the Papers Which Will Be Read

Philadelphia Plans for the Convention

COMMITTEE ON ARRANGEMENTS OUTLINES SOCIAL PROGRAM AND ORDER OF PROCEDURE

All Philadelphia is looking forward with pleasurable anticipation to the coming convention of the American Hospital Association, and is prepared to give the organization and each individual member a right royal welcome.

HEADQUARTERS

The Bellevue-Stratford Hotel has been chosen for the headquarters of the association during the convention, and already many members have reserved accommodations at that famous hostelry. All meetings and sessions will be held on the magnificent roof garden, where also the commercial and noncommercial exhibits will be on display. During the convention the whole roof garden will be at the exclusive disposal of the association.

REGISTRATION BUREAU

In the lobby of the roof garden will be located the registration clerks, four in number, who will register members, collect dues and receipt for same, issue membership cards, and give to each member a program, a badge, booklet about Philadelphia, tickets for theater, auto rides, boat rides, luncheons, etc. On account of the many plans made for the entertainment of guests and the impracticability of any one member taking in all of them, it will be well for all visitors to determine just what they want to do before registering. Every member is especially urged to register at the earliest possible moment in order that the local committee may know at all times how many people are to be provided for.

NONCOMMERCIAL EXHIBITS

Although this exhibit does not come under the charge of the committee on arrangements, the fact that Dr. Alice Seabrooke is chairman of the committee is sufficient assurance that this will be attractive and instructive. Exhibits from all parts of the country are expected, and each one promises something new and interesting.

COMMERCIAL EXHIBIT

The local committee has been working on this feature of the convention for many months, and valuable assistance has been rendered by the officers of the association and many others too numerous to mention. The object of the commercial exhibit, as outlined by the Executive Committee of the association, is educational, and this idea has been ever before the local committee. There seems little doubt that the members will enjoy one of the finest exhibitions of hospital equipment and supplies that has ever been assembled on one floor. As the educational feature is the primal object of the association, it is hoped that

members will carefully study each exhibit and give every encouragement to those firms who have aided us to assemble the vast exhibit. Those who are far removed from the larger cities, and who do not often enjoy the opportunity of seeing such a large assortment of hospital goods, should avail themselves to place their orders at the various booths for such supplies as they may require or may need in the near future.

SOCIAL PROGRAM

When the committee submitted its first program to the president, he was compelled to remind it that it would be necessary to hold a few sessions and to transact a little business during the convention, since the committee seemed to have quite forgotten this important matter. It may be inferred, therefore, that the entertainment of the visitors is limited only by the time available.

Tuesday, 26th, will be entirely devoted to the

opening of the convention and the reading of papers and reports, so that no social function is planned for that day.

The evening of Wednesday will be free, and the committee has arranged to take to Keith's Theater as many members of the association as desire to go, and all who wish to attend are requested to obtain tickets at the registration desk when registering. On this night there will be many dinner parties at the various clubs and restaurants, for which guests will receive individual invitations from local friends and acquaintances.



Fig. 1. Bellevue-Stratford Hotel, where the convention will be held.

Thursday has been set aside for a luncheon at the Pennsylvania Hospital, and every member is invited. This hospital, presided over by Mr. Daniel Test, a former president of the association, and one of the most active members of the local committee, is one of the oldest institutions of its kind in the city, being chartered in 1751. It is said to be the first in America devoted to the relief of the sick and injured. Hanging on the wall facing the entrance to the administration building is the world-famous paint-

inspect Uncle Sam's fighting ships. On the return trip a luncheon will be served on board the steamer, so that no one need hurry back. The steamer will arrive at the dock about 8:30 p. m. Those who choose the auto ride to Valley Forge will have an opportunity of seeing Washington's headquarters and many other sights of historical interest. Fairmount Park, through which the autos will pass, is the largest pleasure park in the world. It lies on both sides of the Schuylkill river for a distance of over

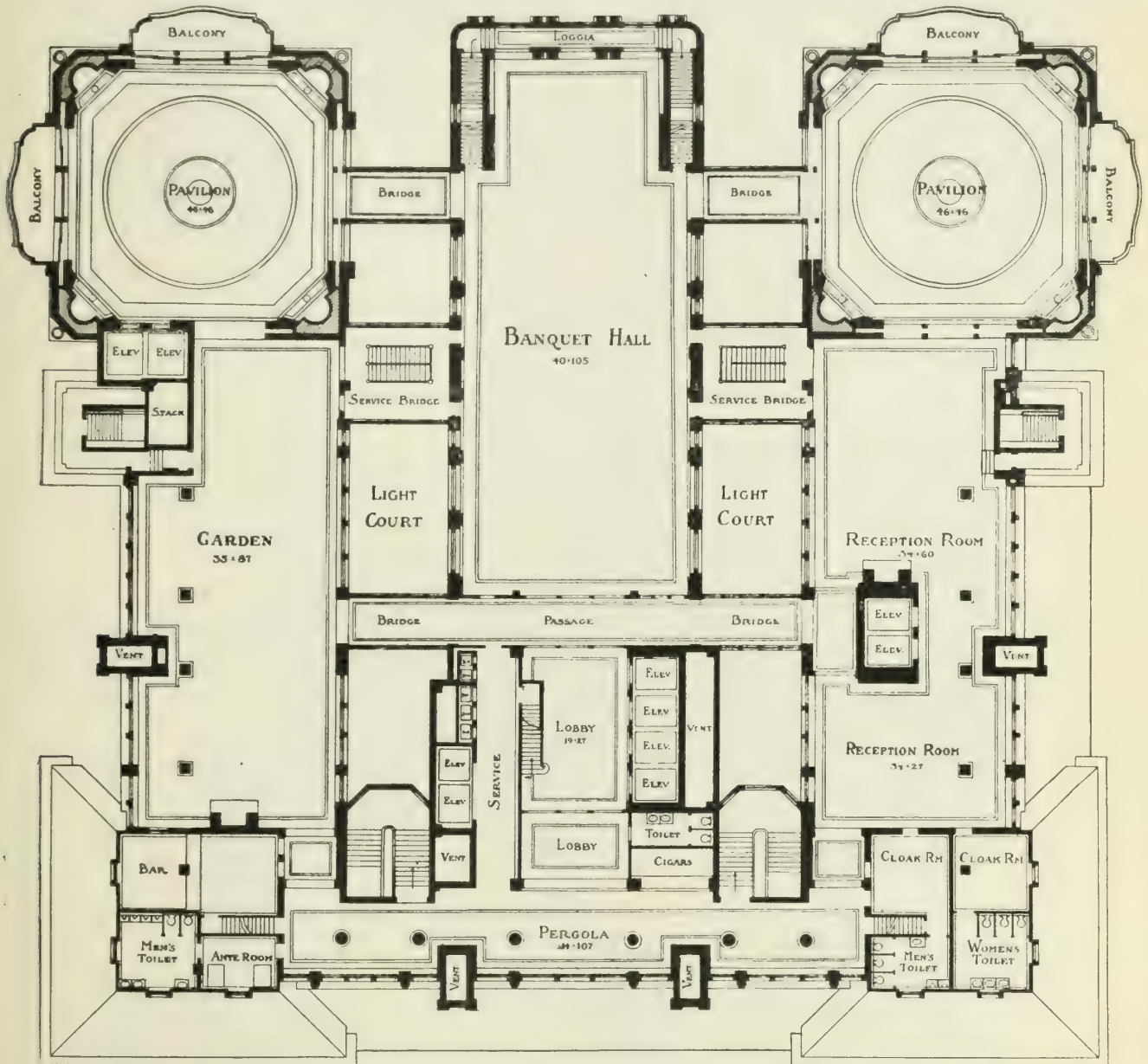


Fig. 2. Floor plan of the roof garden of the Bellevue-Stratford Hotel, Philadelphia, where all the meetings will be held and where the commercial exhibit will be installed. The association has rented the entire roof garden for the period of the convention.

ing, "Christ Healing the Sick," by Sir Benjamin West, and in the garden of the institution is a statue of William Penn. It is anticipated that the visit to this hospital will be one of the most interesting trips that can be made during the convention.

On Friday afternoon all of the members will have their choice of two trips—one by automobile through Fairmount Park to the famous Revolutionary War battlefield of Valley Forge, and the other by steamer down the Delaware river to the Government quarantine station and back by way of the League Island Navy Yard, where all may

five miles. On the river drive will be seen Lincoln's monument and many other notable monuments, and also a house on the bluff where lived Benedict Arnold, the traitor. No one who has ever passed through this beautiful park and along its picturesque Wissahickon Drive has ever forgotten its splendor and natural beauty. Returning from the trip, the automobiles should arrive at the hotel at about 6:30 p. m.

When the convention adjourns on Saturday, there will be special trains to take to either Baltimore or Atlantic City all members who desire to go. The former city is



Fig. 3. Corridor in Independence Hall.



Fig. 6. Banquet room in Independence Hall.



Fig. 4. Independence Hall.



Fig. 5. Liberty bell in Independence Hall.



Fig. 7. City Hall.

well worth a visit, and, aside from its interest on account of its educational institutions, is one of the most beautiful cities in America. The officials of Johns Hopkins Hospital have made special arrangements to receive visitors on that day, and it is hoped that as many as possible will avail themselves of the privilege. Atlantic City has been well called the world's playground, and is undoubtedly the most popular and most frequented pleasure resort in the country. The sea bathing is unexcelled, and every other enjoyable feature of a sea-coast summer resort is readily available at little cost. The famous board walk, extending the whole length of the beach front, is an interesting spectacle, crowded as it is throughout the day and night with throngs of happy pleasure seekers. Here, at last, will you find absolute relief from anything that looks like a hospital, a trustee, or a patient, and you can fill your lungs to your heart's content with the purest air that ever blew; where the only orders taken or given are for something good to eat or drink, and the only admissions and discharges are to the entrances and exits of cafes and shows. But why continue, for it is certain that within twenty-four hours you will have completely forgotten that you have ever seen a hospital, if, forsooth, you will not have completely lost your identity.

SOUVENIR BOOKLET

As each member registers he will be supplied with a booklet containing the names of the officers of the association, a short history of the organization, the social program, and an excellent description of Philadelphia and vicinity, with street guide, map, etc. The booklet will also contain the name of each hospital, with location, the names of superintendents, and, finally, the names of all the commercial exhibitors.

BADGES

A special badge has been designed by the local committee and approved by the president for this occasion. These insignia are very neat and well worthy of careful preservation. There are separate badges for the friends of members, which can be obtained at the time of registering.

RECEPTION COMMITTEE

The hospital superintendents of Philadelphia, sixty strong, will form a reception committee for the purpose of meeting all guests at the various railroad stations, take them in autos to their hotels, and, in general, make them feel at home. Automobiles for this purpose will be decorated with banners on which will be painted the name of the association, and the colors will be yellow and blue. The local committee is particularly desirous that all who visit the city shall be saved any possible inconvenience, and that everyone shall be made to feel at home and among friends. The committee is at the command of the association for the accomplishment of this result.

It is the confident belief that this, the eighteenth annual convention, will be one of the most successful in the history of the association, that all who come will hear a most instructive program and have a very enjoyable time, and, finally, that it will be a sad misfortune for anyone to miss this meeting.

A Welcome From the Convention City

CITY COUNCIL, HEALTH OFFICERS, COMMITTEES, AND CITIZENS
PREPARING TO ENTERTAIN OUR HOSPITAL FOLKS

Thirteen years ago Philadelphia had the honor of entertaining the American Hospital Association, then known as the Association of Hospital Superintendents. The small society of that period has grown beyond all thought

of its founders, and, now numbering hundreds to its tens at that time, it again gives Philadelphia the pleasure of welcoming it. The local committees are busy perfecting their plans for the reception and entertainment of the members and their families and friends.

Not only will the association meeting be a rare treat to all interested in this line of work, but the city of Phila-



Dr. H. K. Mohler, superintendent of the Jefferson Medical College Hospital, secretary of the local committee.

Dr. William H. Walsh, chairman of the local committee of arrangements.

delphia and its vicinity are full of historic, interesting, and instructive places. The opportunity to see these for the first time, as it will be for many, will add much to the interest of the trip.

The program has been arranged with a special view to the entertainment of our guests. The city council invited the association to meet here; the director of public health and charities, Dr. Wilmer Krusen, is tireless in devising ways of interesting all who come; and Dr. William H. Walsh, the chairman, assisted by his committee, has left nothing undone that will conduce to the pleasure and profit of the visiting members and all in attendance.

Philadelphia is a medical center, six colleges affording an opportunity unequaled elsewhere. The stores, the churches and schools, the manufactories and publishing houses, the art galleries and museums, will tempt many to linger long, and the "City of Brotherly Love" extends to all its most cordial invitation to come and prove its hospitality.

ALICE M. SEABROOKE.

Famous Philadelphia

Our association meets this year in the famous old "City of Brotherly Love." We shall have not only the most up-to-date, progressive, and the best hospital meeting the association has ever had, but we shall all have an opportunity to link the present with the far distant past, and those who attend the convention will have spread before them a kaleidoscopic view of American history, the like of which they will never be able to obtain elsewhere. It will be a liberal education, and to those of us who were partial to history in our school days it will be an inspiration to go back over the scenes of America's early struggles, catastrophes, misfortunes, and final triumphs.

Fortunately, this year it was determined by the president and executive committee of the American Hospital Association to mix pleasure with business, and the committee on arrangements has prepared a program that will enable us, not only to enjoy the society of each other, to renew friendships made in previous years and to make new ones, but it will enable us to get the closest and most intimate view of the great past of our country.



Fig. 8. Bird's-eye view of Philadelphia.

Philadelphia today is among the very foremost in America in so many respects that a mere recapitulation would be tiresome; but it was also the birthplace of many arts and sciences, the beginning of many practical every-day industries. The first steamboat that ever floated was on the river at Philadelphia, the first printing shop in America was founded there, the first library, the first university, the first medical school, the first book was made there, and the first banking institution begun, the first mint, the first type foundry, the first water works, the first board of trade, the first trust company; and, while we are accustomed to talk about "sleepy" Philadelphia, evidently the Quakers have not been asleep, because its wealth today is fabulous. With one-sixtieth of the population of the United States, it produces one-twenty-seventh of all the goods manufactured. It makes up more raw material into manufactured products than any other city. It leads in the value of its manufacture of textiles, carpets, rugs, leather goods, hosiery, knit goods, woolens, locomotives, steel railway cars, iron and steel ships, felt hats, saws, upholstered goods, oilcloth, and many other articles. It manufactures 211 of the 264 products made in America.

But we like the old Philadelphia best. It was veritably the "cradle of American independence," and while we are there we shall have an opportunity to see Independence Hall, where the declaration of independence was signed and under whose dome sleeps the old Liberty Bell; we shall see Carpenter's Hall, on a back street, where the first Continental Congress was held and whose halls almost echo the eloquence of Patrick Henry and Benjamin Franklin; Congress Hall, where the early congress met; the Betsy Ross house, at 239 Arch street, where the first American flag was made; Christ Church burial ground, where Benjamin Franklin lies; the University of Pennsylvania, that the old lightning tamer founded; Fairmount

Park, the largest pleasure park in the world, and a thousand other places of equal fame and equally dear to every American.

Not only all this, but those of us who come out of the West will have an opportunity to pass by some of the famous places of our country. Many of us will travel by the old Baltimore & Ohio road, now renewed, rejuvenated,



Fig. 9. Carpenters' Hall.

and brought up to date; but we shall not forget that it was the first railroad in this country, and perhaps we shall see Old Ironsides, the famous locomotive that pulled the first car in the world over steel rails in 1728. We shall see Harper's Ferry, Wilmington, where the battle of the Brandywine was fought, and if we have time we shall see the beautiful old stream, now almost every foot given over to park purposes. We shall pass through Relay, twelve miles from Baltimore, where Stephen Morse sat and sent the first telegram that was ever transmitted. We shall see Valley Forge, made famous by Washington and his starving troops, many old battle fields of the Revolution and the Civil War, the wonderful Potomac river and its historic guide posts over which Langley flew the first flying machine. We shall cross the Allegheny and the Blue Ridge mountains, and pass through that country where Washington and Braddock fought the Indians.

We shall probably stop at Washington, the most beautiful city in the world, and recently made famous by that



Fig. 10. Steamer City of Wilmington, on which members and their friends will take an excursion on the Delaware river.

We do not know what Dr. Smith is to discuss in his presidential address, but it goes without saying that it will be well worth while. Dr. Smith has a gift for writing, and more especially a talent for striking keynotes, and we may expect something good from him.

Mr. Borden, trustee of Union Hospital, Fall River, is to



Fig. 11. League Island Navy Yard.

marvelous architectural grouping of national buildings. Those who have not been to that section of the country where we are going should make every effort to participate in what is undoubtedly to be a memorable visit in the lives of all of us.

The Program for Philadelphia

MANY UNSETTLED PROBLEMS OF GREAT INTEREST TO HOSPITALS TO BE DISCUSSED BY EXPERTS

Each annual meeting of the American Hospital Association serves to bring forward, as part of the program, nearly all the live topics under discussion and study in the hospitals of the country. This year is no exception, but, on the contrary, the program for the Philadelphia meeting seems to include discussion of more serious problems than have ever been brought together before. Beginning with the address of Dr. Winford Smith, president, and ending with the last paper on the last day, there is to be a feast that hospital administrators, trustees, medical staff members, and financial supporters of hospitals cannot afford to miss.

report for the Committee on Constitution and By-laws. For several years we have been talking about changing some of the organic laws of the association, changes in the direction of a broader democracy in the business conduct of the association. Last year, at San Francisco, some resolutions were passed, one providing for an executive committee to be appointed at large, it having been the habit heretofore to appoint that committee as a sort of arrangement committee for the following convention, the members all hailing from the convention city of that year. It was thought at San Francisco that this was wrong, and that an executive committee should be more representative of the hospital field, and that members should be selected from various sections of the country, the San Francisco resolution having been in the nature of a suggestion to the new president, who acted on it this year.

Another vital problem is the make-up of membership in the association. It has been felt for some time, by a good many members of the association, that active membership should not be confined to superintendents of hospitals,

but that everybody in active work in the hospitals should have an equal voice and vote.

Last year, at San Francisco, there was also adopted a resolution providing for a commercial exhibit at Philadelphia, but there is nothing in the organic law of the association providing for this. Dr. W. H. Walsh and his committee on arrangements and entertainment and commercial exhibit, have prepared a commercial exhibit for this year, and those in attendance will have an opportunity to judge for themselves whether the commercial exhibit should become a fixed feature of the association meetings, sanctioned in the organic law.

Another problem which Mr. Borden's committee will report on probably will be the method of electing officers of the association. Heretofore there has been a nominating committee, and the committee's nominations have usually been accepted by the association. The wiser heads in the association have felt for many years that if nominations were allowed to originate in a committee appointed for a whole year, the choice of officers could be more carefully made than if nominations were made on the floor and officers elected on the spur of the moment. It rarely happens that officers chosen in that way meet the requirements as well as those chosen after a careful analysis of the situation by a responsible committee. But there are members of the association who prefer the floor nomination method.

Another question that will come up before Mr. Borden's committee is that of a permanent secretary. There has been no permanent secretary to date, and the income of the association from membership dues has not been sufficient to justify the election of a qualified secretary, with salary sufficient to pay him or her. It was believed by some members that the commercial exhibit, if properly conducted, would go a long way to help finance the permanent secretaryship, and that with such an officer the association could broaden the scope of its work and do many things for its members that are not now being done.

Dr. Charles H. Young, superintendent of the Presbyterian Hospital, New York, is to have a paper on "Medical Organization and Medical Education." Dr. Young is perhaps in a better place to discuss this subject than almost anyone else because the Presbyterian Hospital has just recently become affiliated with Columbia University and has broadened out to be a teaching hospital.

Dr. Young, moreover, has a very wide-awake medical staff that has been of immense value to him and to the hospital over which he presides. There is, to most of us, a very clear line between the activities of the medical staff and the administration of the institution; this line has not been clearly drawn up to this time. It has been drawn in

the Presbyterian Hospital, and it has developed there that there was plenty of splendid work to be done both by the medical staff and by the executive of the institution—work that need not overlap and that can best be accomplished by a clear understanding of the specific duties and obligations of each.

TUESDAY AFTERNOON

The afternoon session of the first day, Tuesday, September 26, is to begin with discussions on the nursing problem; first, there is the report of the Committee on the Training of Nurses, by Miss Crandall, and, second, the report of Miss Aikens' Committee on the Grading and Classification of Nurses.

Miss Crandall thinks things are moving in the right direction in the nursing field, and that the various problems are solving themselves

nicely. She thinks that standards are being raised everywhere, and that the quality of the nursing is becoming infinitely better. Miss Aikens probably agrees with Miss Crandall on those points, but Miss Aikens finds a hiatus in the nursing world that the association ought to undertake to fill by some definite pronouncements on the problems of classification and grading. Miss Aikens thinks there ought to be at least three classes of nurses—one made up of highly educated women, capable of being molded into teachers; another class not so well equipped educationally, who can be trained as actual nursing nurses; and a third class to be made up of women with grammar school education, who after a shorter period of training than three years could be trained for nursing among the middle classes who cannot afford to pay regular graduate nurse fees. The nursing profession agrees that there ought to be this last-named class, but that



DR. WINFORD H. SMITH.

President American Hospital Association, Superintendent Johns Hopkins Hospital, Baltimore, Md.

they ought to be called "mothers' helpers" or "attendants," and that they ought to be distinguished definitely from trained nurses entitled to the R. N. degree. This is an old problem, and we have it every year.

Dr. Babcock's paper on "The Open Door Hospital" is also to be read on Tuesday afternoon and discussed by Dr. Fowler, superintendent of the Louisville City Hospital. Dr. Babcock has one of the best administered hospitals in this country, and he has a medical staff the members of which have definite executive duties to perform, and Dr. Babcock leans on his staff and expects it to keep the hospital's medical service and technical operations up to a high order. But Dr. Babcock also has many outside physicians bringing patients into Grace Hospital; these outside physicians are carefully chosen, and only those competent to do good medical and surgical work are allowed the privileges of the hospital.

This problem of a hospital staff versus the so-called "open door" is an insistent one all over the country in both large and small hospitals. As hospitals are drawing closer every day to universities and medical schools, and more and more of them are becoming essentially teaching hospitals, there is growing up a tendency to believe in a definite staff with definite duties. A good many educators in the medical schools and universities are not satisfied that outside physicians shall have the privileges of the hospitals that work in affiliation with them, and insist on a strictly closed hospital, or one in which only the medical staff may work.

There is a very pronounced financial angle to this problem, and many hospital superintendents and boards say they would find it impossible to finance their institutions if outside physicians were not permitted to bring in paying patients. This part of the problem is answered by the closed staff proponents with the insistence that hospital funds should be raised by other means than from paying patients, and that finance has nothing to do with the morals of hospital administration. They say that a hospital cannot give the highest order of service to the sick if outside physicians are permitted to bring in their patients and do any kind of medical and surgical work that they please or that they know how to do.

Dr. Fowler will undoubtedly discuss the problem from the standpoint of a municipal hospital, and he ought to speak with great authority, because Dr. Fowler's own city has been regenerated recently. A few years ago it had four or five medical schools, and these have now been boiled down to one, which has had the effect of very greatly clarifying the medical situation in Louisville, and it ought to have had an uplifting effect on the municipal hospital.

On this same afternoon also, Dr. R. R. Ross, superintendent of the Buffalo General Hospital, will report for the Committee on the Development of the Association. Undoubtedly Dr. Ross will find that the association has not been doing for its members all that such a body ought to be able to accomplish, and it would seem that the time has come for a man as discerning and analytical as Dr. Ross to recommend some specific duties and obligations for the association. Just what these are it would be unfair to Dr. Ross and his committee to attempt to anticipate.

TUESDAY EVENING

Tuesday evening's session will be given over to a symposium on "Out-Patient Work." Dr. Cabot, of Boston, who has led in clinical dispensary work for years, will talk about what dispensary work should stand for; Dr. Wm. F.

Snow, secretary of the American Social Hygiene Association, will talk about "Venereal Clinics and Their Proper Lines of Development." Someone else will talk about "Industrial Accident Cases in Dispensaries and How They Should Be Handled and Financed," and the evening will wind up with the report of Mr. Davis' Committee on Dispensaries and Out-Patient Work.

This ought to be one of the best sessions of the whole meeting. No one knows more about what dispensary work should stand for than Dr. Cabot, and he can always be counted on for some new wrinkle and new suggestions as to the progress of dispensary work in order that it may become broader and reach deeper into that class of the public for which dispensaries are supposed to be conducted.

Dr. Snow has given an immense amount of time and thought to venereal clinics and the care of the venereal diseases. He has been everywhere and has seen everything, and knows what this country and Europe are doing about the venereal diseases, and he ought to bring to this symposium a clarity of thought and a fund of common sense that should be helpful to every hospital in the country because the venereal diseases are one of the most insistent problems in every hospital.

Mr. Davis and his committee, we know, have been giving us a masterful leadership in the progress of dispensary work, and the committee this year ought to have something new to offer and undoubtedly will.

Evidently President Smith had some difficulty in finding a speaker to discuss "Industrial Accident Cases in Dispensaries—Should They Be Accepted? How Shall the Finances Be Managed?" Nearly every state in the Union has passed laws for workmen's compensation, sick insurance, employers' liability, and many states have legislated on new features of industrial

sickness service. Coupled with this service in the province of law-making, nearly all industrial corporations are doing more or less welfare work for their employees and many new questions have arisen, questions that ought to be discussed by this speaker: What are the proper limitations of industrial welfare work among corporations and what part of public dispensary service should be taken over by the corporations in behalf of their own employees? Shall industrial corporations be charged exclusively with the out-patient and dispensary care of all their employees, or, on the other hand, shall the nonlaboring members of the family be thrown on the mercy of public dispensaries and out-patient departments? Shall industrial corporations take care of the medical ailments of their employees or only of the injuries? And overshadowing all these problems is the ever insistent one of wages coupled with the



DR. C. D. WILKINS,
First Vice-President,
Superintendent Charity Hospital,
New Orleans, La.

MISS NETTIE B. JORDAN,
Second Vice-President,
Superintendent Aurora General
Hospital, Aurora, Ill.

DR. A. R. WARNER,
Third Vice-President,
Superintendent Lakeside Hospi-
tal, Cleveland, Ohio.

high cost of living: Will it help any if wages were so high in this country that employees and their families would be beyond the necessity of seeking aid from public free dispensaries? Or, Would poverty be just as insistent when sickness came to the home even though the wage-earner were paid wages large enough to enable him under good,



MISS LYDIA H. KELLER,
Secretary American Hospital Association.

careful management to finance his family, no matter how large, when sickness came? All these problems must be up for discussion in this Tuesday evening symposium.

WEDNESDAY MORNING

Wednesday morning Dr. Arthur B. Ancker, superintendent of the City and County Hospital, St. Paul, presents his report for the Committee on Hospital Construction. Dr. Ancker has one of the best hospitals in the country, and by all odds the most nearly perfect municipal hospital—perfect in architecture and administration. He has been building on his own account for more than thirty-five years, and, with an analytical and mechanical mind, he has delved deep into the problems of construction in every phase. He ought to bring hospital construction down to date for the benefit of the association.

Grosvenor Atterbury, of New York, is to talk on "Hospitals and Esthetics." Mr. Atterbury has not written much into the hospital literature, but he has done a great deal of work—some of it very excellent. He writes brilliantly, and his paper ought to be among the best at the meeting.

Dr. Howard, superintendent of the Peter Bent Brigham Hospital, is to discuss Mr. Atterbury's paper, and those who have been through the Peter Bent Brigham Hospital will agree with the proposition that Dr. Howard can put more esthetics into a hospital than any other administrator in the country; and yet Dr. Howard is full to the brim of good sense and good judgment, and he has a way of selecting the wheat from the chaff in hospital architecture, equipment, and administration second to none, and his discussion ought to measure up well beside Mr. Atterbury's paper.

Dr. Eliot P. Joslyn, of Harvard University Medical School, is to discuss "The Hospital Dietary" as the last feature of the morning's session, and Dr. Thomas McCrae, professor of medicine, Jefferson College, Philadelphia, is to discuss the subject. There is no more important problem in the hospitals today than the dietary; we know that, because our drug rooms are growing infinitely smaller year by year and our diet kitchens and the work done in them are growing larger. Many medical men have almost ceased the use of drugs, and are leaning harder and harder on the feeding of their patients. But the hospital dietary is perhaps capable of more exactness than any other department of the institution. The chemical constituents of food, the physiology of the digestion and the idiosyncrasies of individuals mean very much more, and feeding the sick does not contemplate alone the preparation and service of food, but it means the perfect jibing of the feeding and its effects as measured by the physical and laboratory findings as the case progresses. Dr. Joslyn and Dr. McCrae should make an interesting story of all this.

WEDNESDAY AFTERNOON

Dr. Robt. J. Wilson, superintendent of hospitals, of the New York Health Department, is to open this session, which is in reality a symposium on the communicable diseases, with a paper on "Disinfection and Other Practical Methods of Preventing the Spread of Infections in Hospitals." During the past year the New York Health Department has given up the cut-and-dried practice of fumigating homes after the patient has recovered, and in a bulletin not



MR. ASA BACON,
Treasurer American Hospital Association, Superintendent Presbyterian Hospital, Chicago, Ill.

so long ago Dr. Goldwater, then commissioner of health, explained that this abandonment of the old methods of fumigation was due to some careful studies made in the department, which showed that most of these methods were ineffective. Dr. Wilson in his work in the communicable disease hospitals had not relied on gas fumigation, and he has been studying carefully this problem for some time, and ought to throw light on the best methods of cleaning up after the infections and the best methods for preventing their spread.

Dr. William H. Walsh, of Philadelphia, was superintendent of the Communicable Disease Hospital of that city for some time, and did some fine work there. He also had charge of the Philadelphia General Hospital later on, and even in a building as old and dilapidated as "Old Blockley" he managed to cut down the cross-infections in a most measurable degree. His discussion of Dr. Wilson's paper ought, therefore, to be illuminating.

The next paper, "The So-called Diphtheria Epidemics in General Hospitals—Preventive Measures," by Dr. Clyde G. Guthrie, associate in medicine at Johns Hopkins, promises some light on a subject that at the present time is filled with misgivings and unsolved problems. The phrase "so-called" in the title of the paper raises the hope that Dr. Guthrie will help us to determine whether those diphtheria epidemics that come up so unexpectedly in our hospitals are in reality diphtheria, and communicable as such, or whether they are pseudo-diphtheria, as many pathologists have asserted. Some years ago a certain large hospital with 150 nurses got a case or two of what was diagnosed as diphtheria, and cultures were taken of all the nurses in the school, with the result that nearly one hundred of them had diphtheria microorganisms in their throats. Obviously the hospital was in a panic; all the nurses carrying diphtheria were isolated, and the hospital was closed to patients; nothing much developed, and the scare was apparently all for nothing. What was it? Perhaps Dr. Guthrie will answer the question.

Dr. Ross, of the Buffalo General Hospital, will discuss Dr. Guthrie's paper, and, as Dr. Ross not so long ago had an epidemic of this sort, he should speak as one having authority.

Dr. Milton C. Winternitz, of the pathological department, Johns Hopkins, will discuss "Autopsies—Methods of Obtaining Same and Measures of Protecting the Hospital." Of recent years Johns Hopkins has materially increased the number of its autopsies in proportion to the number of deaths, having now arrived at a figure of more than 60 percent of autopsies. There are ways of getting autopsies—arguments for friends and relatives, justification for autopsies, and their necessity for the protection of descendants of patients; and it is also greatly to be desired that there be autopsies in the interest of medical science. American hospitals have been far behind those of Europe in this respect, and for obvious reasons, but the percentage of autopsies is rapidly growing in this country, and Dr. Winternitz should throw so much light on the subject that his paper should be extremely helpful to hospital superintendents who are now finding it all but impossible to secure consents for autopsies.

Unfortunately Dr. Holt will not be with us at Philadelphia, as he died early in August in the hospital of which he was superintendent, and it is to be hoped that Dr. Smith will be able to find someone who had the same problems in regard to autopsies that Dr. Holt had—viz., a very large percentage of patients who were charity cases and who were foreigners, mostly Jews, who have a religious aversion to autopsies; and yet, when the writer of this comment was superintendent of Michael Reese Hospital, it was not difficult to obtain autopsies even where there was the greatest aversion to them.

AFTERNOON SESSIONS FOR SMALL HOSPITALS

Miss Jordan has carefully prepared a symposium for her first session on "The Creation and Management of a Community Hospital," and some of those whom she has on her program are doing very much in just the class of hospitals that need them most. Dr. W. T. Graham, superintendent of University Hospital, Iowa City, has a paper

on "The Survey of the Community" and the analysis of the situation leading up to the creation of the community hospital, and Dr. E. E. Munger, Spencer, Ia., is to discuss Dr. Graham's paper. Dr. Munger, it will be remembered, drew the so-called Iowa law for the creation of the county hospital. A dozen or more states have enacted this law since, and now the county hospital has come to stay. No one knows more about the Iowa idea than Dr. Munger, and those who are in charge of hospitals in the states that have a similar law have much to learn until they hear Dr. Munger on the subject. Mr. Chapman, of Mt. Sinai Hospital, Cleveland, made a record in the St. Louis City Hospital for management of the physical departments. There is no difference between the management of the small and the large hospital, except in scale; the problems are the same and must be met in the same way.

Miss Martha Oaks, of St. Luke's Hospital, Davenport, will also discuss this subject. She has a small hospital and is managing it wonderfully well; she has probably more difficult problems than almost any other superintendent in the country. She has an entirely useless board of trustees and a splendid board of women managers; she has an aggressive medical staff and many good men, some of whom are rather insistent in many directions and in many activities, and Miss Oaks has done admirably and with such success that she now has \$125,000 with which to build a new hospital. Her story ought to be of infinite interest and profit.

Miss Ida Barrett, superintendent of Blodgett Memorial Hospital, Grand Rapids, reads a paper on "Financing the Small Community Hospital." Miss Barrett has just finished building and financing her own institution, and she has done so well that now she not only has a splendid new hospital, but John W. Blodgett has made the hospital an endowment that takes it out of the needy class. If Miss Barrett will tell others in her paper how to persuade money into their coffers, she will meet a long-felt want.

Miss Barrett's paper will be discussed by Miss Jayquith, superintendent of the Children's Hospital, Worcester. Miss Jayquith also has just passed through hospital difficulties and come out triumphant.

Mr. Ralph Shephardson, the architect of Aurora, Ill., built Miss Jordan's new hospital at Aurora, which is just now being opened. Anybody who could please Miss Jordan in the designing of a hospital and in the building of it afterwards ought to have a mighty interesting story to tell, because he has probably had his troubles.

Mr. Shephardson's paper will be discussed by Miss Margaret Robinson, superintendent of the second of the Iowa hospitals to be built under the Iowa law. The story of the Jefferson County Hospital has been published, and it is a most interesting story, but it has now been in operation for two or three years, and Miss Robinson ought to bring the story down to date and tell us to what extent the people of the community, especially the rural part of the county, are supporting her hospital and patronizing it, because it is becoming more evident every day that there is great need of small community hospitals, especially in those communities where the rural population is progressive enough and far-sighted enough to give them proper support.

THURSDAY MORNING

The Thursday morning session opens with the report of the Committee on a Bureau of Hospital Information by Dr. Howell. This committee has had pretty hard sledding for several years, has done some hard work, and has really made little progress, because it seems there is a great difference of opinion as to how and by whom a bureau of hospital information should be conducted. There



Fig. 12. Woman's Southern Homeopathic Hospital, showing also laundry in the center and nurses' home at the right.



Fig. 15. Woman's Hospital.



Fig. 13. Jefferson Hospital.



Fig. 16. St. Mary's Hospital.



Fig. 17. Presbyterian Hospital, showing also administration building and men's surgical ward.



Fig. 14. Medico-Chirurgical Hospital and College.

was an attempt made to get such a bureau inaugurated in connection with the public health service of the Government, but that failed because of Congressional disapproval; one of the large foundations was asked to take up the work, and that, too, failed for some reason which Dr. Howell will make plain, and perhaps Dr. Howell will also make some new proposals for the creation of such a bureau, possibly under the auspices of the American Hospital Association.

Dr. Hornsby will report for the Committee on Hospital Standardization. While he and his committee have done some work out in the field and feel that it has achieved much, there is not a great deal to report. Undoubtedly the hospitals are standardizing themselves from within their own walls, and in the past two or three years there is no doubt that hospital standards have been raised many degrees.

Professor John J. Bowman, director of the American College of Surgeons, will read a paper on "A Study of

There are far too few hospitals whose administrators pay any attention to dental work among their patients. Therefore the paper on "Dental Clinics in General Hospitals," by Dr. Thomas B. Hartzell, University Hospital, Minneapolis, ought to awaken the hospital people to a realization of one of the most important things in modern-day care of the sick, and Dr. Cox's discussion ought to emphasize what Dr. Hartzell has to say, because Dr. Cox has been in intimate association with some of the most progressive work in hospitals for a number of years.

THURSDAY AFTERNOON

There are to be two sessions on this afternoon—one for the large hospitals and one for small hospitals—conducted by Miss Jordan. In the large hospital section, Dr. Clover opens with a report from the Committee to Memorialize Congress to Place Instruments on the Free List. We may imagine that Dr. Clover will express a good deal of hopelessness in regard to results that his



Fig. 18. University of Pennsylvania Hospital.

Hospitals for the Purpose of Arriving at Proper Standards." The American College of Surgeons, under the stimulus of Dr. Bowman's personality, has done a great deal of work in investigating the situation in the hospitals, and Dr. Bowman has visited many sections of the country and has made an intimate study in the medical schools and the hospitals. He is a brilliant writer, a splendid speaker, and his paper will certainly be enjoyable and illuminating.

"Team-Work and Stumbling Blocks," by Dr. Charles A. Drew, of the Worcester City Hospital, ought to be well worth while. Dr. Drew is a splendid hospital administrator, a careful and conservative man, who has a very large following among those who know him best; he knows what team-work and stumbling blocks are, and his guidance in regard to the one and his warnings in regard to the other should be most helpful.

committee has been trying to bring about. The surgical instrument trades in this country are opposed to allowing foreign-made instruments to compete on an equal footing with those made in this country, and now the war has probably disturbed things to such an extent that even the Democrats will be thinking about a tariff wall.

Dr. Warner, of Lakeside Hospital, Cleveland, is to report for the Committee on Hospital Finances and Cost Accounting. There is no one better qualified to discuss this subject, because Dr. Warner's institution has made some radical jumps in the last year or two, and he has had his hands full in handling his finances and keeping his budget down. In order to succeed he has had to adopt radical measures of accounting, and, since Dr. Warner writes well and talks well, his paper ought to be valuable.

Mr. O. H. Bartine, superintendent of the Hospital for



Fig. 19. Children's Hospital.

Ruptured and Crippled, New York city, gave to the association at San Francisco a most valuable paper on hospital construction. He goes one step farther in his paper this year and takes up the divisions of the hospital by departments and rooms. Those who enjoyed his paper last year and profited by it should by all means keep in touch with the thread of his narrative concerning hospital construction, and it is certain that they will profit greatly thereby.

Mr. Bartine's paper will be discussed by Dr. Bachmeyer, of the Cincinnati General Hospital, who also has had much experience during the past year or two in conducting the operations of the big new Cincinnati General Hospital that has been the cause of so much discussion.

Dr. Frederic Brush, superintendent of the Burke Foundation, White Plains, N. Y., has done more in regard to convalescent homes and has written more into the literature about them than anyone else. He has a new idea every day, and fortunately has the money to express his ideas into action.

Dr. Washburn, of the Massachusetts General Hospital, is to discuss Dr. Brush's paper, and between them they ought to illuminate a subject about which very much more is to be heard in the next few years. One of the radical directions of hospital progress during the next ten years is to be toward the establishment of convalescent homes in the country, more especially in connection with



Fig. 20. German Hospital.

already established metropolitan hospitals. Members of the association are all vitally interested in this subject because even those who cannot hope to build or control convalescent homes in the near future ought to be thinking about adding the convalescent home atmosphere and its economies, convalescent labor principles, diversional work, and so on, to their present hospital activities, and it goes without saying that those who do hope to have convalescent homes or who now have them will get very much from this discussion.

SMALL HOSPITAL SECTION

The symposium selected by Miss Jordan concerns the scientific work in the small hospital, and Miss Mary Riddle, of Newton Hospital, Newton Lower Falls, Mass.,



Fig. 21. Jewish Hospital. Medical building.

will open the discussion with a paper on "How May a Hospital Superintendent Promote More Scientific Work in the Small Hospital?" Miss Emma Anderson, of Boston, and Miss Goodrich, of Teachers' College, are expected to discuss Miss Riddle's topic. Dr. Howland, of the Massachusetts General Hospital, will discuss the "Training of Superintendents for Small Hospitals." The Massachusetts General Hospital now has a training school for executives, and has been doing some really excellent work in that direction, sending out some well-trained women. Mr.



Fig. 22. New Rush Hospital.

Bishop, superintendent of the Robert Packer Hospital, at Sayre, Pa., is to discuss Dr. Howland's paper. Mr. Bishop and his hospital at Sayre are to be heard from in a large way in the next few years. He has brought hospital teamwork by way of an all-time medical staff to a higher development certainly than any other small hospital, and he has done well with it both from the standpoint of administration and in a financial way.

Dr. Pelton, of Elgin, Ill., is to discuss how the scientific services may be standardized in the small hospital. These services are not yet standardized, and hospital superintendents all over the country are asking questions about standards of scientific work. Dr. Pelton has given an immense amount of thought to the subject, and, being on the staff of a small hospital and in close touch with the activities of a very good institution, he ought to throw a great deal of light on a subject that is now extremely hazy.

FRIDAY MORNING

On Friday morning Dr. Summersgill, of the University of California Hospital, is to report for the Committee on hospitals and their activities, and some of the legislation is crude and unworkable, some of it is vicious, and some of it leads in wrong directions. The hospitals should Legislation. All the states are legislating in regard to certainly plan to go before their state legislatures and impress their wishes on those who are to be responsible for law-making; in most cases legislators are anxious for information as to the hospitals' side of the case, and wrong



Fig. 23. Hahnemann Hospital.

legislation is usually due to want of information on the part of the legislating body, coupled with lack of interest, or lack of action on the part of the hospitals. Hospitals are suffering greatly on the financial side from legislation in some states, and everybody ought to hear Dr. Summersgill's report because it should contain many valuable suggestions.

The next two papers, "The Hospital and the Surgeon," by Dr. Goldwater, and the report of the Committee on Efficiency and Progress by Dr. George O'Hanlon, of Bellevue, might well be bracketed, because today the hospital and the surgeon are much closer together than they have ever been, and recognition of their mutual interests will do more for efficiency and progress than anything we know about.

Hospitals of Philadelphia

For sixty-one years the Children's Hospital has rendered the most careful and skillful aid to the sick poor children of Philadelphia and vicinity. It is supported partly by income and partly by voluntary contributions, and no state aid is received. It has outgrown two successive buildings, and will shortly occupy the first section of its third establishment, on the half-square at Eighteenth,



Fig. 24. Jefferson Hospital. Roof garden for private patients.

Bainbridge, and Fitzwater streets. When this group is completed, Philadelphia will have the finest hospital for children in the world. The Children's Hospital cares for children from before birth to twelve years of age. Expectant mothers reporting for attention are given examination, advice, and care. Sick babies and children have the most skillful medical, surgical, and nursing care. The department for the prevention of disease follows up cured patients into their homes, to see that their care and surroundings are such as to prevent a recurrence, and also to see that any well children there are under hygienic conditions. Physical instruction is given for the development of defective children. The dispensary service for out-patients gives relief to all cases not sufficiently serious to admit to the wards.

The Medico-Chirurgical College is situated on the corner of Seventeenth and Cherry streets, and comprises the departments of medicine, dentistry, pharmacy, chemistry, and pharmaceutical chemistry. The present capacity, including the maternity and children's departments, is 310 beds. The clinical amphitheater, with private operating rooms, is adjacent to the hospital on the north side of Cherry street, east of Eighteenth street; its floors and wainscots are of marble, and its construction is fireproof throughout. The seating capacity is about 600. In 1911 a building to be used exclusively for dispensary purposes was erected on Cherry street, opposite the main hospital building, and has spacious and well-equipped rooms for fourteen separate dispensary services in all branches of medicine and surgery, a hall, with a central waiting room, drug room, store rooms, etc. The new maternity and children's departments are situated on the corner of Eighteenth and Cherry streets. In addition to the free wards, there are semiprivate wards and private rooms. The roentgen laboratory occupies the space in the front part of the main hospital building on the first floor.

The Woman's Hospital of Philadelphia has the unique distinction of being entirely a hospital for women and children, officered entirely by women. Organized in 1861 in a private house, it has grown steadily until it will accommodate 200 patients. A somewhat remarkable coincidence is the fact that it is fifty-five years old, there are

fifty-five women physicians officially connected with it, and fifty-five nurses in the training school. Organized when women physicians were denied the privilege of attending their patients in the rooms and wards of other hospitals, its object was a threefold one—first to afford a place where women could be cared for by physicians of their own sex; second, to furnish opportunity for women students of medicine to have clinical instruction; and third, to train women to care for the sick. These objects have been faithfully followed ever since its inception.

Pennsylvania Hospital was founded in 1751, and was the first hospital established in America. It was originally chartered by the Provincial Assembly of Pennsylvania to care for the poor, sick, and insane. The original building in which the institution was housed for ninety years still stands at Eighth and Spruce streets. This old building forms 1 percent of the splendid group covering over five acres of ground, and more than 63,000 poor persons have been given treatment within its walls. The principal founder was Benjamin Franklin.

The hospital of the Protestant Episcopal Church is usually called the Episcopal Hospital, and is located in the northeastern section of the city, surrounded by manufacturing and industrial plants. It is a general hospital, has a large dispensary and out-patient service, and takes all except contagious diseases. There is a separate building for the children.

Presbyterian Hospital was founded in 1871, in commemoration of the old and new school Presbyterian

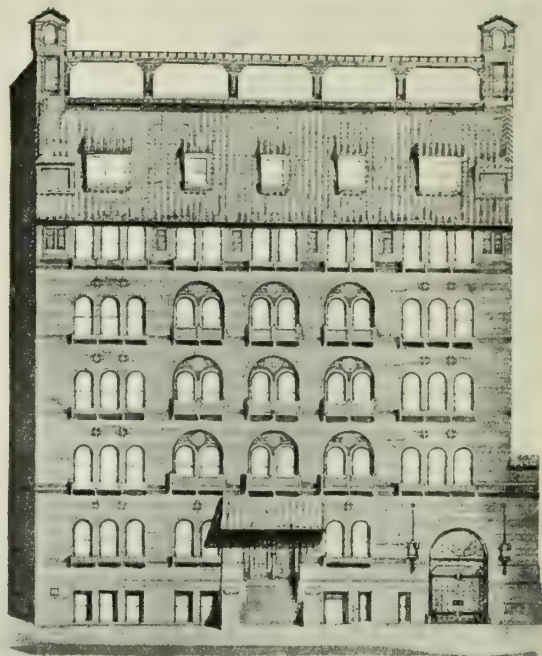


Fig. 25. Hospital of the Woman's Medical College of Pennsylvania. Main building.

Churches. Its government is conducted by representatives of the Presbyterian Church, but outsiders also help with its support. It has 235 beds, and maintains also a home for incurables and a home for convalescents, both of these being situated near Devon, Pa.

Philadelphia Lying-in Charity Hospital boasts of having the first training school for nurses in the United States. It was organized eighty-seven years ago and does an immense amount of free work. It has a social

service conducted under the auspices of an aggressive and active woman's board.

The Hospital of the University of Pennsylvania was founded in 1874 by the late Dr. William Pepper, and is situated on the south side of Spruce street, just south of the collegiate and scientific departments of the university. There are several memorial wings, with a capacity of 450 beds, and there are 130 nurses.

The Hospital of the Woman's Medical College is a teaching hospital connected with the Woman's Medical College. It has 75 beds, and the amphitheater accommodates 125 students. The maternity department has connected with it an out-patient service, administering to poor women in the outlying districts.

St. Mary's Hospital is just completing a new building intended to be one of the most up-to-date and carefully designed hospital buildings in the country. It occupies practically the whole block between Frankford avenue and Palmer, Sepviva, and Eyre streets. The old building is still retained and will continue to house patients.

Chestnut Hill Hospital was organized twelve years ago



Fig. 26. Chestnut Hill Hospital.

by a group of citizens living on Chestnut Hill. It has an aggressive and active woman's board, a large dispensary, an out-patient service, and an enthusiastic medical staff.

Hahnemann Hospital was organized in 1886, and has a capacity of approximately 200 patients. It has an excellent training school, a good dispensary, and an out-patient department.

Mount Sinai Hospital was founded in 1899, and the new building built in 1909 was purposely erected in the ghetto district of the city. The hospital is intended more especially to care for poor Jews of that community.

Rush Hospital has a capacity of 50 beds and the country branch at Malvern 30 beds. Both institutions are devoted exclusively to the treatment of pulmonary and laryngeal tuberculosis.

Jefferson Hospital was established forty years ago, and adjoins Jefferson Medical College, the college and hospital being governed by one board of trustees. The present building was completed and dedicated in 1907.

The Jewish Hospital was founded fifty-one years ago, and last year cared for 2,721 patients, of whom 65 percent were absolutely free.

Philadelphia's Municipal Farm

We wish very much that visitors to the Philadelphia meeting of the American Hospital Association would go

out and see Bybury Farm if they can, and, at any rate, have some well-posted Philadelphian tell them all about it.

Bybury is about fifteen miles out in the country, the trip taking one through innumerable old-fashioned toll gates. It contains 1,100 acres of excellent farming land, and belongs to the city.

The farm is in the evolutionary stage, being fitted gradually for the purposes of convalescence. Up to three or four years ago it was conducted merely as a farm—a very good farm, with a herd of fine Holsteins and a new breed of hogs formed of a cross between the large type Berkshire and the English Yorkshire. It had fine meadows, and raised thirty-five to forty bushels of wheat to the acre and seventy bushels of oats, and Philadelphia was proud of her farm. But only 300 or 400 acres were being cultivated because labor was scarce and high.

Three years ago 500 or more harmless insane patients were fretting their lives out in the tiny court of Blockley Hospital, milling about on the worn-out lawn in summer and pacing the wards in winter. Then somebody, not a Philadelphian, suggested that perhaps there was an answer to the farm labor problem in these 500 discontented and unhappy insane, and that perhaps there was also an answer to the discontent of the insane—out on the farm. And something has been done about it—not much, but something, and attendants on the convention will find a most interesting situation, one full of promise for the future.

A TELEGRAPHIC SIGNAL SYSTEM

Cincinnati General Hospital Employs Novel Method for Calling Officials and Interns

A signal system of a kind used in few, if any other similar, institutions in the country has lately been installed by the Cincinnati General Hospital. It consists of a complete telegraph outfit, the exchange, or master key, of which is placed in the main office, and more than two hundred instruments are distributed through the buildings. The same wires are used for the telegraph as for the intercommunicating telephones with which the hospital is equipped, and the exchange is operated by the same person who attends to the telephone exchange. A simple number code is used, and a number is given to each building and department and to each official and intern. By a manipulation of these numbers, individuals may be called and dispatched to the various parts of the institution. No experience in the sending or receiving of telegraphic messages is required to operate the instruments, as no attempt is made to code words, all necessary communications having been worked out in numbers, which are easily understood.

The telegraphic signals are especially advantageous when the telephone fails to work or is in use, but the chief value of the system, according to the hospital officials, lies in the fact that it can be used for business only, and unnecessary conversation need not delay business messages. A similar system has been in use at the Cincinnati Hospital for twenty-five or thirty years.

Dr. Frank H. Holt, superintendent of Michael Reese Hospital, Chicago, died in the hospital of an acute infection of obscure origin on August 3. Dr. Holt went to Michael Reese two years ago from the Boston City Hospital, where he had been assistant superintendent for about twenty-three years. He had made an excellent record at Michael Reese, especially in the physical and financial departments of the institution, and his loss will be keenly felt by those responsible for the conduct of the hospital.



CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature,
Army Medical Museum and Library, Office of the Surgeon-General,
United States Army.

Butter Versus Margarine. Ed. Hospital, 1916, LX, No. 1560.

The amount of proteid material present in butter, as well as in margarine, is practically negligible from a dietetic point of view. The dietetic experts who condemn margarine rest their claim for the greater value of butter on the alleged but unproved greater digestibility of animal as compared with vegetable fats, and on the admitted presence in butter and absence from margarine of phosphorized fats and vitamins. The experience of medical men in charge of large institutions where the change from butter to margarine has been made shows conclusively that in the vast majority of cases the substitution can be made without any ill effects if a good brand of margarine is used.

The People's Sanatorium Umberto. I. at Prasomaso (Il sanatorio popolare Umberto I. di Prasomaso). Ospedale Maggiore, Milano, 1916, IV, No. 1.

This sanatorium was established by a group of benevolent citizens of Milan, the king of Italy contributing \$40,000. The institution is intended to receive poor tuberculous persons of the city and province of Milan. The sanatorium is located on the southern slope of the Rætian Alps, 1,250 meters above the sea. It is well protected from the cold north winds, and a large pine forest forms its northern and western limits. It offers a magnificent view toward the south. The sanatorium consists of a main building devoted exclusively to the patients, a dwelling for the superintendent, and a building for the general services. The main building extends 107 meters from east to west, is four stories high, and is amply provided with terraces for open-air treatment. The sanatorium has room for 168 patients, but, if necessary, can house 176.

Experiments with Rubber Gloves. Dr. Carl E. Block. Jour. Kansas Med. Society, 1916, XVI, No. 6.

The author's experiments were conducted from the standpoint of the interference of the rubber gloves with the tactile function. His conclusions were based on observations of some 144 blind patients who read entirely by finger touch and were dependent on this method for the purpose. Each observation consisted in reading with the finger thirteen lines of Braille text printed on both paper and brass plates, with the following results: 1, reading with bare fingers, average time, 48 seconds; 2, reading with average weight well-fitting gloves, 70 seconds; 3, reading with oil inside the gloves, 68 seconds; 4, reading with gloves placed on wet hands, 65 seconds; 5, average time for reading with gloves under average conditions, 70 seconds. Gloves placed on the hands wet impaired the sense of touch less than gloves put on dry.

The Christiania Municipal Hospital for the Insane at Dike-mark, Asker. Dr. H. Holm., Tidsskrift f. d. norske Laegefor., Kristiania, 1916, XXXV, No. 7.

In 1896 the city of Christiania decided to erect a new hospital for the insane. The plans were drawn up after the well-known hospital Alt-Scherbitz, near Leipzig. For the site of the new hospital a beautiful region about fifteen miles southwest of the city of Christiania was selected. In 1905 four pavilions for male patients were completed, and up to 1908 the administration building and four pavilions for women were erected. In 1911 a pavilion for violent male patients and in 1913 one for female patients was completed. At present the hospital has room for 233 male patients and 251 women, but, when completed, the institution will be able to house about 800 patients. The hospital grounds comprise about thirty-four acres. All pavilions have two stories, with a basement and an attic. The buildings so far constructed, with all the equipments, cost 2,181,975 crowns (about \$590,000.00), or 4,196 crowns (\$1,032) per bed. The article is accompanied by a number of photographs showing the various buildings and a beautiful panoramic view of the whole hospital.

The Hospital Chemical Laboratory. N. W. Janney. Journal of Laboratory and Clinical Medicine, 1916, I, No. 10.

The author urges a greater laboratory development in hospitals. The laboratory directors should be trained in biochemical work, and not chosen from the ranks of physicians bent on a purely clinical career. Newly introduced biochemical methods are becoming ever increasingly such direct aids to clinical diagnosis and treatment that of the total clinical laboratory examinations a large percentage are already chemical. The prevailing type of hospital laboratory seems but poorly prepared to cope with these new demands made on it by biochemistry. In choosing a director it is well to avoid a one-sided view of the situation, overbalanced either in the chemical or medical direction. The successful organization of a hospital laboratory depends much on the director and his ideas. In brief, the physical equipment should be considered in four categories: (1) the chemical laboratory, (2) the metabolic ward, (3) provision for animal experimentation, (4) and library.

The Organization and Management of Children's Hospitals (In argomento di assetto e governo di ospedali infantili). Prof. V. Tedeschi. Rivista di clin. pediat., Firenze, 1916, XIV, No. 3.

The author believes that the mothers should be received and housed in the hospital with the infants. The expenses would not be so much greater as it would at first sight appear, because the number of nurses could be greatly reduced. It would also not be necessary to place each mother with her child in a separate room, except in cases of contagious diseases. For such cases a separate pavilion should be erected, with several divisions for the various diseases, each containing six rooms opening into a common hall, but each division being strictly separated from the others.

For the treatment of lobular pneumonia, Tedeschi holds that every children's hospital ought to be provided with an open-air hall. He has tested this method of treatment and has had great success with it.

With regard to cholera infantum, he finds that it rarely ever occurs among breast-fed children. For artificially fed children he considers it indispensable for every children's hospital to have a pavilion at high altitude, to which such patients can be sent. His extensive experi-

ence has taught him that the sojourn in the mountains is the best possible treatment for cholera infantum.

Dr. Dedeschi has succeeded in interesting the prominent ladies of Padua in his views on the care of sick children. Through his efforts a considerable sum has already been collected and a new children's hospital is to be erected, in which the principles enunciated in his article are to be realized.

What Is a Good Refrigerator? Frances Gable. *Good Health*, 1916, LI, No. 7.

The efficient refrigerator should be made of mortised oak, and with a choice of three kinds of linings—i. e., spruce, white enamel, or glass. Zinc linings are not only unsatisfactory, but dangerous because of the danger of food becoming tainted with the metal. The best shelves are of heavy plate glass or woven steel wire plated with tin. Dripping pans should be of heavy galvanized steel and seamless. To secure good results, an adequate air circulation is necessary. Food compartments should be made of solid porcelain, and those constructed of thinly lined porcelain or of glass are to be condemned. Of equal importance is good drainage, as the sanitary value of the refrigerator depends almost entirely on the efficiency of the drain pipe.

The Psychiatric-Neurological Clinic in Groningen (De psychiatrisch-neurologische kliniek te Groningen). Dr. W. H. Mansholt. *Ziekenhuis, Amsterdam*, 1916, VII, No. 6.

When the new General Hospital of Groningen was built, it was intended that a psychiatric-neurological clinic should later be added to the hospital. The buildings for this purpose have lately been erected, and the clinic was opened on the first of January of this year. Though built on the grounds of the General Hospital, the clinic is an entirely independent institution.

The clinic consists of two long and narrow three-story buildings, one behind the other, and connected in the middle by covered galleries, so that the ground plan has the form of the letter H. The first or front building is intended for male patients, the rear building for females.

The first floor of the front building contains the x-ray room, the laboratory, a psychological laboratory, the library, and various offices. The corridors extend along the whole north front of the buildings, the sick rooms taking up the southern front. There is room for 120 patients, but there is sufficient space for 140 beds. The building cost 500,000 florins (\$205,000), while 80,000 florins (\$32,800) were spent for furniture and equipment.

The Solution of Antimony from Enamel Cooking Utensils. Elizabeth W. Miller. *Jour. of Home Economics*, 1916, VIII, No. 7.

Numerous experiments were conducted by Miss Miller, University of Chicago, to determine the possibility of the solution of harmful substances from enameled dishes in the cooking of foods. Harmful substances which may be present in enamels are lead, arsenic, and antimony. Lead is used in glazes, fired at low temperature because of wide range of fusion, low viscosity, and brilliancy. Experiments tend to show it is used occasionally, but has not a general use. Dishes which yield more than 2 milligrams of lead per liter when boiled for one-half hour with 4-percent acetic acid should not be used. Antimony in culinary utensils is forbidden by law in Germany and Austria because of its harmful effects. According to experimental work on some fifteen different dishes, some of standard make, others of a cheap variety, antimony in quantity was

extracted in only one case, a cheap gray enamel kettle purchased at a 10-cent store. The experiments tend to prove that only the better grades of enamelware should be purchased, and as a precaution even the best ware should not be used in cooking food containing a high percentage of acid.

The Fiftieth Anniversary of the State Hospital for the Insane at Eberswalde (Zum 50-jährigen Bestehen der Landesirrenanstalt Eberswalde). *Psychiat. neurol. Wochenschr.*, Halle a. S., 1915-16, XVII, No. 27.

The hospital at Eberswalde, in the province of Brandenburg, was erected in 1862-65. It was originally laid out on the so-called block system, with three rows of buildings arranged in a square. The middle row contains in front the administration building, behind it is the church, and still farther back is the building containing the heating plant, machine rooms, etc. On each side of these structures are four hospital buildings. As the population grew, the institution had to be enlarged. First a house for 100 quiet, working male patients was added, then another for 120 female patients of the same class. In 1913 a separate division, consisting of four buildings, for 150 patients of the educated classes was added. These buildings contain a large number of small rooms, with one or two beds. A music room, reading room, etc., with all the comfort to which such person are used, were also established. Another addition was the erection of forty-one dwellings for married male nurses and their families. The grounds were gradually enlarged by the acquisition of neighboring property, so that the hospital owns now 97.85 hectares, of which 77 hectares are used for agricultural purposes.

Vitamines and Bread. Ed. *Good Health*, 1916, LI, No. 8.

A great deal of attention is being given to the study of pellagra and other food-deficiency diseases. The study on which the report was made was carried on chiefly in Spartanburg county, South Carolina. The reduction of vitamins and the consequential increase in pellagra is laid to three causes. First in importance is the decrease in quantity of vitamine-rich foods ordinarily used, such as milk and fresh eggs, which is due chiefly to increased costs. Second is the introduction of highly milled cereal products, both of wheat and corn, in place of the older process articles, which contained more of the husk and of the kernel of the grain, and was correspondingly richer in vitamins, which difference especially affects the poorer classes, where bread is the chief article of diet. The third factor is the increased use of baking soda in the preparation of bread since the introduction of highly milled flours and corn products. Soda is used to help raise the bread and too often is not combined with any acid, as, for instance, from sour milk. The authors quoted indicate that the alkali seems to destroy the vitamine content of the grain, and thus to render the bread even more deficient in vitamins.

The Emma Clinic in Utrecht. Dr. J. W. T. Lichtenbelt. *Ziekenhuis, Amsterdam*, 1916, VII, No. 5.

In erecting this new hospital the pavilion plan was entirely discarded and all parts were brought under one roof, but the building is so arranged that the rooms of the service personnel are strictly separated from the sick wards. The hospital consists of a basement, three stories, and an attic. The basement, which is almost completely above ground, contains the rooms for the servants, the kitchen, store rooms, laundry, auto garage, and central heating plant. A dumbwaiter connects all stories with

the kitchen. By a special entrance for the automobiles the patients are transported directly to the elevator, which carries them to the upper stories. On the first floor is the dining room for the nurses, a waiting room, and an x-ray room. Seven rooms are at present occupied by the director and his family, but later a separate building will be erected for him. On the second and third floors are the sick rooms. The smaller rooms are 4 by 6 meters, the larger ones 5 by 7 meters. A corridor 3.75 meters wide runs through the middle of each floor. The attic contains the nurses' rooms. On the south side the roof is turned into a terrace, from which one has a splendid view of the city and which is used as a solarium by those patients who need open-air treatment. The elevator extends upward to this lofty terrace.

Hospital Hints. J. F. Axtell, M. D. Jour. of the Kansas Med. Soc., 1916, XVI, No. 7.

About all a hospital can expect to do is to collect enough money from its pay patients for the running expenses of the hospital and to support its charity patients. It is seldom that anything can be saved for rent or dividends, and, if it could be done, it should go to a fund for more and better buildings and equipment, for hospitals must grow, and more and more people in the future will take advantage of hospital facilities than in the past. Every good town of several thousand inhabitants should organize and maintain a small hospital. The physicians of the town should get together and work together in harmony for their own good and that of the community. There are always enough citizens with civic pride in a town who will give of their money toward such an organization. One or two physicians cannot support a hospital, and therefore it is necessary that all shall work together. In the organization of these hospitals they should not be made private corporations. There should be no capital stock issued and no dividends declared. The money that is used to build these hospitals should be donations, and what the hospital may save in its freedom from taxation, and the surplus, if it should be fortunate enough to have any, can go to charity and for more and better buildings and better equipment.

The Trailer Ambulance. Howard H. Johnson. The Military Surgeon, 1916, XXXIX, No. 1.

The advantages of the trailer ambulance are: (1) low cost; (2) use with the thousands of civilian cars which could be obtained in time of war; (3) simplicity of construction; (4) an ambulance which is not dependent on the whims of one motor for safe arrival at its destination; (5) the possibility of making up ambulance trains drawn by the two-ton truck on the line of communication or elsewhere; and numbers of other excellent points which will develop with practical application. In the trailmobile each litter and seat has the necessary maximum of spring at all times through the arrangement of six spiral springs under the ledges upon which the litter rests. The capacity of three-litter and two sitting-up cases in the trailmobile ambulance can readily be converted to eight sitting-up cases by the use of transverse jump-seats, which may be carried in the bottom of the bed, or by the use of litters as seats. The trailer ambulance can be manufactured quickly and in large numbers at approximately \$175. A heavier, more pretentious, and consequently less desirable type will cost over twice this amount. With many points of excellence and adaptability so readily discernible in the trailer, it seems that the time and transportation factors of removal of large numbers of wounded

have given way, to a large extent, to the less troublesome ones of roads and mathematics.

The Pennsylvania Workmen's Compensation Act as It Affects Hospitals. William H. Walsh, M. D. The Pennsylvania Med. Jour., 1916, XIX, No. 10.

Prior to the inauguration of the provisions of the Workmen's Compensation Act, a number of the Philadelphia hospital superintendents met for the discussion of the act as it affected the hospitals, and as a result it was decided, for the sake of uniformity, to formulate a schedule of prices to be charged for all hospital cases coming under the provisions of the act. When the schedule had been definitely accepted by the superintendents it was submitted to the trustees of all the hospitals in Philadelphia, many of which have formally adopted it after consultation with their respective staffs. The following is the fee schedule for the treatment and care of industrial accident cases under the state compensation act:

HOUSE CASES	
Bed, board, and general nursing (minimum charge, \$5), per day	\$2.00
Operating room fee	5.00
Ambulance service	no charge
Laboratory examinations (not often needed)	\$2.00 to \$5.00
Special drugs, serums, vaccines	at cost
RECEIVING WARD AND DISPENSARY CASES	
First dressing	\$1.00
Subsequent dressings	1.00
Anesthetics	3.00
OTHER FEES	
Minor operations	\$ 2.00 to \$ 5.00
Major operations	25.00 to 50.00
X-ray examinations	3.00 to 10.00
Reducings and dressings—fractures	5.00 to 15.00
Reducings and dressings—dislocations	3.00 to 10.00
Written report at any time as to condition of patient	no charge
Special examination and full report	\$3.00 to \$5.00

The Preparation of the Patient for Operation. Walter B. Lancaster. Journal of the Am. Med. Assn., 1916, LXVII, No. 4.

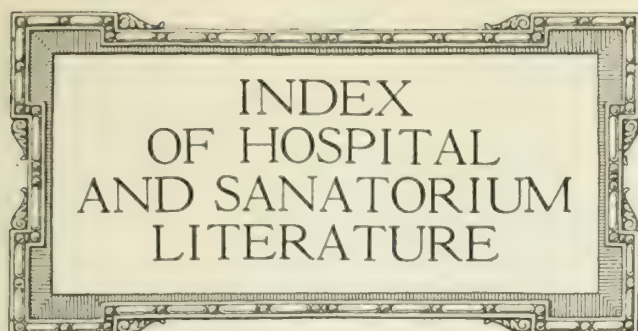
Dr. Lancaster emphasizes the necessity of a more thorough and systematic consideration of the patient's mind, his body in general, and his eyes in particular. In preparing the patient for an operation the aim should be to "rob surgery of its terrors."

In taking the history of the patient, special attention should be paid to previous operations, the anesthesia, convalescence, complications. If the patient has any idiosyncrasies, it is important to know them. A schedule of a routine examination is given, including observation of the nose and mouth, eyes, lacrimal sac, conjunctiva, skin, and attention is also called to arteriosclerosis and other diseases which might effect narcosis.

The article includes the discussion of various eminent authorities regarding the general procedure of preparation, etc.

Institutional Disposal of Sputum. Ed. The Hospital, 1916, LX, No. 1569.

In dealing with the disinfection of sputum, it is very desirable that a method should be adopted which reduces the handling of cups and flasks to a minimum, and thus the risk of infection to the attendant. Hence it is common to place the cups just as they are collected into a special caldron containing a solution of soda, which is brought to the boil by means of steam. The mixture of sputum and soda solution, after being boiled for twenty minutes, is run off and the sterilized pots thoroughly rinsed in fresh water. Glass spittoons are treated similarly, but are placed first in cold soda solution, their caps being removed and thrown in also; heat is applied more gradually in order to avoid cracking the glass, but otherwise the method is similar.

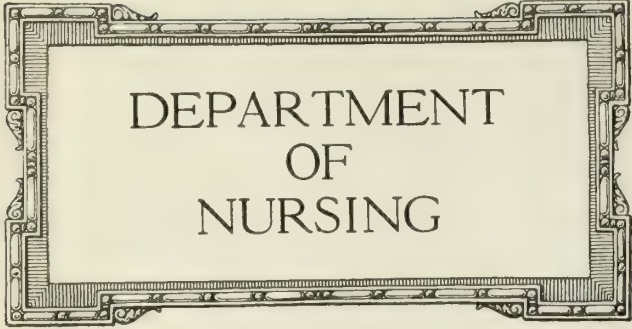


ALBERT ALLEMANN, M. D., Foreign Literature,
Army Medical Museum and Library, Office of the Surgeon-General,
United States Army.

- Bay, H. H.** A Preliminary Report on Graduated Exercise Inaugurated at the Cook County Tuberculosis Hospital. *Illinois Med. Jour.*, Chicago, 1916, XXIX, pp. 285-290.
- Bentley, F.** The Blind in the State of Washington. *Northwest Med.*, Seattle, 1916, XV, No. 3.
- Compagna, R.** Roman Hospitals (Ospedali di Roma). *Clinica dermasifilopat.*, Roma, 1916, XXXIV, No. 1.
- Cotte, G.** Two Weeks' Surgery in a Hospital Center at the Front During an Offensive Movement (Quinze jours de chirurgie dans un centre hospitalier de l'avant au moment d'une offensive). *Lyon chirurgical*, 1916, XIII, No. 1.
- Davis, M. M.** What the Campaign Against Venereal Disease Demands of Hospitals and Dispensaries. *Am. Jour. Pub. Health*, New York, 1916, VI, No. 4.
- de Fleury, M.** Economical Treatment of the Tuberculous in Temporary Hospitals (Traitement économique des tuberculeux dans les hôpitaux temporaires). *Bull. Acad. de méd.*, Paris, 1916, LXXV, No. 8.
- Dumarest, F., and Vigne, A.** The Temporary and Economical Hospitalization of Tuberculous Soldiers (De l'hospitalisation temporaire et économique des tuberculeux de guerre). *Paris Médical*, 1916, XVIII, No. 3.
- Fiore, G.** The Clinic for Clinicians and Pathologists (La clinica ai clinici ed ai patologi). *Rassegna sanitaria*, Milano, 1916, XIV, No. 5.
- Flint, J. M.** Experiences in a Base Hospital in France. *Boston Med. and Surg. Jour.*, 1916, CLXXIV, No. 10.
- Fuster, E.** The National Movement Against Tuberculosis in England (L'action nationale contre la tuberculose en Angleterre). *Rev. d'hygiène*, Paris, 1916, XXXVIII, No. 4.
- Goodnow, Minnie.** First Year Nursing, a Text-Book for Pupils During Their First Year of Hospital Work. 2d ed. 358 pp. 8vo. Philadelphia, W. B. Saunders, 1916.
- Hamilton, Edith.** New York Medical College and Hospital for Women. *Woman's Med. Jour.*, Cincinnati, 1916, XXVI, No. 3.
- Holmboe, M.** The Problem of Tuberculosis Sanatoriums (Die Sanatorienfrage). *Zeitschr. f. Tuberk.*, Leipzig, 1916, XXV, No. 3.
- Koonz, Beatrice.** My Patients—Nurses' Record. 8vo. Jersey City, 1916.
- Labbe, H.** Aid and Education of Tuberculous Soldiers at the Sanitary Stations Established by the Department of the Interior (L'assistance et l'éducation des tuberculeux de la guerre dans les stations du Ministère de l'Intérieur). *Paris méd.*, 1916, XVIII, No. 3.
- Latarget, A.** The Work of a Distributing Ambulance from the 25th to the 30th of September (Le fonctionnement d'une ambulance de triage du 25 au 30 septembre). *Lyon chirurgical*, 1916, XIII, No. 1.
- Landouzy, L.** The War and the Aid for the Tuberculous Soldiers. *Rev. scientifique*, Paris, 1916, LIV, No. 4.
- Louart, G., and Fiessinger, N.** What we have seen at the Hospital Center of C— (Ce que nous avons vu au centre hospitalier de C—). *Rev. gén. de clin. et de therap.*, Paris, 1916, XXX, No. 2.
- Mansholt, W. H.** The Psychiatric-Neurological Clinic in Groningen (De psychiatrisch-neurologische kliniek te Groningen). *Ziekenhuis*, Amsterdam, 1916, VII, No. 6.
- Markoe, J. W.** Open-Air Treatment in Surgery. *Bull. Lying-in Hosp.*, New York, 1915-16, X, No. 3.
- McCarthy, D. J.** The Value of the Psychopathic Hospital. *Pennsylvania Med. Jour.*, Athens, 1915-16, XIX, No. 5.
- Pettavel, A.** Surgical Experiences in a Red Cross Hospital at Lyons (Kriegschirurgische Erfahrungen aus einem Rotkreuzspital in Lyon). *Cor-Bl. f. Schweiz. Aerzte*, Basel, 1916, XLVI, No. 11.
- Ravaud and Dumontier.** The Hospitalization at Paris of the Tuberculous Soldiers Discharged from the Army (L'hospitalization des réformés tuberculeux a Paris). *Rev. d'hygiène*, Paris, 1916, XXXVIII, No. 3.
- Robertson, S. M.** The Employment of Female Nurses in the Male Wards of Mental Hospitals in Scotland. *Edinburgh Med. Jour.*, 1916, XVI, pp. 193-203.
- Spier, J. R.** Work in the Base Hospitals. *Canadian Med. Assn. Jour.*, Toronto, 1916, VI, No. 3.
- Staurenghi, C.** The Ospedale Maggiore of Milan and Its Ancient Sepulchres (L'Ospedale Maggiore di Milano e i suoi antichi sepolchri). *Rassegna di clin. terap.*, Roma, 1916, XV, No. 3.
- Stimson, Julia.** Nurses' Handbook of Drugs and Solutions. 111 pp. 8vo. Boston, 1915.
- Tedeschi, V.** The Organization and Management of Children's Hospitals (In argomento di assetti e governo di ospedali infantili). *Riv. di clin. pediat.*, Firenze, 1916, XIV, No. 3.
- Turner, D.** Report on the Radium Treatment at the Royal Infirmary, Edinburgh, during the year 1915. *Edinburgh Med. Jour.*, 1916, XVI, No. 3.
- Uzureau, F.** At the Hôtel-Dieu of Angers, 1709 (A l'Hôtel-Dieu d'Angers en 1709). *Arch. méd. d'Angers*, 1916, XX, No. 11.

Miscellaneous

- A Plea for a Merit System and Civil Service in Our Eleemosynary Institutions.** C. R. Woodson, M. D. *Jour. Mo. State Med. Assn.*, 1916, XIII, No. 7.
- Biological Products, Establishments Licensed for the Propagation and Sale of Viruses, Serums, Toxins and Analogous Products.** *Pub. Health Rep.*, Washington, 1916, XXXI, 943-948.
- Danger in Baths to Patients Suffering from Arteriosclerosis.** William Watt Kerr. *California State Jour. of Med.*, 1916, XIV, No. 7.
- Economic Conditions in Nurse Training.** Ed. *The Hospital*, 1916, LX, No. 1570.
- Edinburgh War Hospital, Bangour.** *Edinburgh Med. Jour.*, 1916, XVI, No. 2.
- Foodstuffs.** Donald Sommerville, M. D. *Nursing Times*, 1916, XII, No. 585.
- Hospital Architecture and Construction.** Ed. *The Hospital*, 1916, No. 1570.
- Records and Classification of Tubercular Patients.** Ed. *The Hospital*, 1916, LX, No. 1571.
- Some Basic Principles of General Anesthesia.** Carl G. Parsons. *Am. Jour. of Surgery*, 1916, XXX, No. 7.
- Suggestions as to Domestic Science Equipment.** Eda Lord Murphy. *Jour. of Home Economics*, 1916, VIII, No. 7.



DEPARTMENT OF NURSING

Conducted by MISS ANNIE W. GOODRICH.
Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

Advances in Nursing

As again from all over the country, and in ever-increasing numbers, students flock to the universities, colleges, and schools, it is of much interest to those in the educational field to note the changes, and especially the evidences of progress, in their own particular branch or profession.

In nursing we herald with delight several notable developments. Through Dr. Robert G. Patterson, director of the Division of Public Health Education of the State Board of Health of Ohio, a course in public health nursing is offered under the administration of the Department of Health and Sanitation of the College of Medicine of the Ohio State University. The courses, as outlined in the announcement, together with the opportunities for field work with the district visiting, social service, and other welfare organizations in the city of Columbus, and the close connection with the office of the state supervising nurse, Miss Helena Stewart, cannot fail to give a full return to those nurses in the public health field who avail themselves of this opportunity. We predict that in the near future Dr. Patterson's efforts will be fully repaid.

Not less important than the public health course at the Ohio State University is the establishment by Simmons College, Boston, of a public health nursing department. This progressive step, we believe, is very directly the result of the valuable work achieved by Miss Mary Beard, director of the Boston Visiting Nurses' Association. For some time this association has offered a most excellent practical course in public health nursing, but Miss Beard, her board, and her faculty have felt greatly the need of such academic courses as may now be obtained through Simmons College. The department will be under the able direction of Miss Anne H. Strong, recently instructor of the Public Health Division of the Department of Nursing and Health, Teachers' College, Columbia University, who has received the appointment of assistant professor. Deeply as Teachers' College regretted to lose Miss Strong, the establishment of these courses at Simmons was too greatly to be desired, and under such direction, to permit of any impeding of the consummation of the project. Teachers' College is so fortunate as to have secured as Miss Strong's successor Miss Florence Johnson, a graduate of Smith College and the New York Hospital Training School, and who has had charge for the past five years of the Social Service Department of the Harlem Hospital, one of the municipal institutions allied with Bellevue. Miss Johnson's fine mind, her sound general and professional education, and her deep sympathy and interest in her problem cannot fail to make her a most acceptable teacher.

From Miss Kate Olmstead, supervising nurse of the Wisconsin Antituberculosis Association, comes a letter appealing for a wider conception of and a better preparation for the great new field of public health nursing, together with a tentative outline of a post-graduate course in public health work for nurses under the Wisconsin Antituberculosis Association, with the cooperation of the extension department of the University of Wisconsin, and the various public health agencies and associations in Milwaukee.

The Western Reserve University of Cleveland, Ohio, has recently taken over the public health nursing course of Cleveland, formerly given by the Visiting Nurses' Association, and placed it under the School of Applied Social Science, one of the new schools of the University. The university will have charge of all the field as well as the academic work. It will also be responsible for the course of lectures in public health nursing given to the senior nurses in several hospitals. Miss Cecelia Evans, of the Cleveland Visiting Nurses' Association, a former student of Teachers' College, holder of an Isabel Hampton Robb Scholarship, has been appointed director. Miss Evans has been conducting with much satisfaction to the students the public health courses for nurses at Teachers' College during the summer session.

The rapid development of these courses in public health work, and the ever-increasing number of nurses who are availing themselves of them, give promise in the near future of the highly prepared and efficient health army which the country so greatly needs, and of which it will have reason to be proud.

Some Educational Problems of Mutual Interest to the Physician and the Nurse¹

BY RUDOLPH MATAS, M. D.,

Professor of Surgery, Tulane University of Louisiana, New Orleans, La.

It was my fortune to have begun my professional career just when the first abortive attempt was made to inaugurate a training school for nurses in this city at the Charity Hospital in 1880, during the administration of that progressive physician and citizen, Dr. Daniel C. Holliday, and during the house surgeonship of my honored friend, Dr. A. W. de Roaldes, whose clear vision and courageous efforts to meet the needs of that big hospital were not rewarded with the success which they deserved. It took a lapse of fourteen years (1894) before the much abused and censured attitude of these pioneers in regard to the nursing question and their far-seeing judgment were vindicated and confirmed by the establishment of the present training school at the Charity Hospital. A better fate attended the efforts of the New Orleans Polyclinic, now the Graduate School of Tulane University, and, as one of its founders and first teachers, I am glad that I participated in the foundation of the first successful training school for nurses, established in this city on the site of the New Orleans Sanitarium, on St. Joseph street, in 1889, and now continued as the Presbyterian Hospital. The school was organized under the auspices of a number of prominent, progressive, and public-spirited ladies, headed by Mrs. William Muller, whose numerous enterprises in the interest of charity and philanthropy are still gratefully remembered. The Touro Training School for Nurses then followed through the energetic efforts of the distinguished house surgeon, Dr. Frederick Loeber, after which the Sisters of Charity at the Hotel Dieu inaugurated their school in 1899.

¹Read by invitation at the twenty-sixth annual meeting of the National League of Nursing Education and of the American Nurses' Association, New Orleans, La., April 27 to May 3, 1916.

And now we see that from these comparatively recent beginnings fully 1,100 nurses have been graduated from these and a few other institutions, of whom probably 890 are now officially registered as graduate nurses on the records of the Louisiana State Board of Medical Examiners, 547 of whom are practicing in the city alone. And it is not only in numerical expansion, but in the changed attitude of the community, in the recognition of the trained nurse as a necessary and indispensable element in the social welfare, that we must consider the progress of the nursing movement, especially in a community as conservative as ours, as a marvelous accomplishment; but it is in the still more phenomenal transformation, during the same brief period, that has taken place in the nurse herself, not only in education and training, but in her new and multiplied relations to the community, that the nurse's rapid advancement must compel our respect and admiration. From what was a most elementary beginning, in which the mere physical aptitude and moral ability of a nurse to become a trained attendant on the sick—whose place in the educational program gave her vocation a mere occupational position—to the present standards of her education and the prerequisites for admission to the best training schools, we must realize that she has been lifted by leaps and bounds to the ranks of a highly differentiated profession. I remember quite distinctly how in speaking to nurses, not so many years ago, I was embarrassed in choosing between the words "occupation," "vocation," and "profession" as applied to nursing. I also found it difficult to speak of a nurse's education as synonymous with her training. When we consider the qualifications required now of women admitted to the best training schools, and of the curriculum that is mapped out for them in the three years of their training, also the elevated character of the teaching they are given at the post-graduate schools, especially at the Teachers' College of Columbia, there is now no longer a question as to the proper use of the word "profession" as applied to a nurse's vocation; and when we understand the difference between the words "train" and "educate" as your distinguished teacher, Miss Isabel Stewart, would apply these terms (in her discussion last year on the "Ideal Nursing School"), we must unequivocally admit that the modern nurse is educated as well as trained for her profession.

As medical men we must recognize that the evolution and history of nursing as an art and science has followed very closely on the rise and development of medical education in this country. The only difference is, as pointed out by that acute and thoughtful observer, Miss Sophia Palmer, that you have covered in forty-nine years practically what it has taken the medical profession 135 to accomplish. The quicker pace with which nursing progress has been accomplished, as compared with medical progress, is easily understood when we consider that nursing is only a comparatively recent and, perhaps, the youngest offshoot of the Hippocratic tree, and that nursing, growing under the protecting shade of medicine, has not only profited by the vigorous sap of the parent trunk, but has enjoyed the constant protection of its dense and umbrageous foliage.

Nursing schools have multiplied in the same lawless way as medical schools, and in the same way have been commercialized. We all recognize the utilitarian as well as humanitarian development of nursing in this country. When the training schools were first established, they were started purely from the hospital utilitarian standpoint, and not from the nurse's point of view; not always with the idea of making nurses as they are today, but for the purpose of realizing urgent necessities. But all this is now happily changing and for the better; the hospitals are

considering the nurse's problems from an entirely different and generous point of view, and in this pressing reform the nurses' organizations are doing more than their yeoman's share of work. Organization has been the great compelling force in rectifying the faults of the pioneer period in nursing, as in medicine. The same evolutionary forces working for betterment have operated on both in the same way; only nursing, as the younger organization, has profited by the example and expansion of the older. The pioneers laid the foundation for the present high edifice of medical education, and have raised the ethical efficiency of the doctor to a level that would have seemed chimerical and an unattainable dream but a few years ago. So the pioneers of the nursing world have laid a foundation upon which the nurse of the future will build—if we interpret aright the spirit which guides your present tendencies—to a superb and commanding profession. And all this is the fruit of organization. The National League of Nursing Education, beginning as the Training Schools' Superintendents' Association, was organized in 1893, and now numbers 500 individual members or more and 13 state league affiliations. The American Nurses' Association was established in 1897, and now has a membership of over 30,000, the graduates of over 1,600 training schools. The course in nursing and health at Columbia was opened in 1900 and has graduated more than 200, quite a number of whom have this year received college degrees. State legislation leading to the creation and establishment of the Board of Medical Examiners, for the proper licensing and registration of duly qualified nurses, began in 1903, and now covers forty-two states of the Union. The National Organization for Public Health Nursing was organized in 1912 and already numbers over 1,500 members. In this way a sharp line of cleavage has been drawn between the trained and the untrained, or, better, the educated as well as trained nurse and the qualified and the unqualified. State registration is now well established. In this state we have the good fortune of possessing a board composed of earnest, zealous, and intelligent officers, who are vigilantly watching the opportunities for advancing the educational requirements of applicants for admission in the nursing schools. Up to the present it has not been possible to demand a higher qualification than the eighth grade of public school teaching, but next year the first year of high school will be demanded as a necessary prerequisite of all applicants. State registration is not to be regarded as a sort of high intelligence office, but a bulwark to efficiency as expressed in educational standards. Then there is the army nurse corps, and there is also a navy nurse corps, with all that these institutions mean, for the protection and care of the soldier and sailor in time of war. The most encouraging and important detail in organization history is the growing relationship between the nurses' national and state societies and the national and state societies of the American Red Cross. And this is especially emphasized in speaking of the Red Cross nurses, the trained nurses, who are everywhere aiding the surgeons on the bloody battle fronts of the present fearful European conflict; in the army hospitals and camps of every one of the belligerent countries, where the surgeon and the nurse are incessantly at work, side by side, in the labor of mercy. One of the few encouraging and redeeming features of the present world war is that, while at no time the forces of destruction have drawn more prodigally from the intelligence and inventiveness of man and from his command of the physical and chemical sciences in order to effect their destructive aims, never before have the same scientific agencies been called on to yield their secrets more lavishly in the effort to conserve and preserve life. Just as there

never have been so many millions of men engaged in the destruction of their kind, so do we contemplate the armies of men and women who are utilizing every agency by which suffering may be assuaged and life spared. The war has also demonstrated that of all the professions, those of medicine and nursing occupy an almost unique relationship to warfare; that among all the citizens of a country at war, medical men and women, including in this category the nurse, occupy a peculiarly distinctive and humane position. No discovery in the medical sciences has been utilized to destroy or harm an enemy. Medical men and women in each of the warring countries are as courageous and patriotic as other citizens; they are as ready to die or to be crippled for life in the service of their country as any other class of their fellow countrymen—but with this difference, that they willingly make these sacrifices in ministering to the sick and to the injured, and in providing for their sanitary needs (Meltzer). Every day we read in the modest columns of the medical press of the unheralded acts of heroism of the surgeons and their helpers on the firing line in their efforts to recover the wounded and bring them to places of safety in order to attend to their immediate needs. In each one of the belligerent countries the number of graves that mark the last resting place of the medical heroes of this devastating war can already be counted by hundreds. In these heroic and humanitarian acts friend and foe are treated alike. Whatever may be said of the inhumanity and barbarity of the war, no one can say that the doctor and the nurse have failed in the discharge of their duties or have been deaf to the call of a common humanity. If any class of people can help to restore the bonds of human fellowship, which at present appear so hopelessly and utterly shattered by the excesses and atrocities of the present conflict, it is the doctor and the nurse. As well put by Miss Hulme, the British delegate to your convention at San Francisco, last year, "When the dawn of a new day breaks, and when peace and charity are again restored, then we trust that the sisterhood of nursing (like the brotherhood of medicine) may be one of the surviving bonds that will once again unite the nations of the world."

From what has been said it is evident that the nurses have been unceasing in their efforts to better themselves and to elevate their professional standards, and that they have done so by the most systematic and intelligent methods of organization. In this upward movement they have met, however, with innumerable difficulties, arising chiefly through their efforts to adjust themselves to the continually growing and changing demands of modern medicine; they have felt the constantly growing stimulus and importance of the multitudinous specialties into which medicine is being rapidly differentiated. In addition, they have been sensitive and responsive to the growing complexity of social conditions, which have come to alter the popular, and even the professional, concept of the nurse's mission and training.

As long as the conservation and welfare of human life were the main consideration—the direct ministrations to the sick—in its simple and primitive form, it was possible for even women of the most elementary instruction to discharge the nursing functions acceptably. This is a concept of the nurse which is fast vanishing in the mists of the past, and will soon remain only as a relic in history and tradition. Today it is universally admitted that the best interests of society are conserved and advanced by a much higher type of woman; one who acts, as Miss Isabel Stewart puts it, "as a scientifically trained assistant to, not the servant of, the physician or the sanitary expert, one who is fitted to lead in certain important branches of

social work." The distinction in the aim of the older methods of a nurse's education and that of the present is fundamental; it is the difference between a training for a more or less skilled handicraft and the training for a profession. As my distinguished friend, Dr. Dock, also puts it: "The nurse is no longer a mere maker of beds, administrator of medicines, a soother of pain, just as the doctor is no longer a mere maker of pills and potions. She has become the eyes and the hands of the doctor in hundreds of details besides the elementary function of pulse counting, temperature taking, and medicine giving. The more learned and expert the doctor, the more can he and the patient profit from the accomplished nurse. The nurse cannot do her duty without also taking part in the essential features of the doctor's work, the prevention of disease, the conservation of health, not only in the abstract but in every patient cared for. Then, just as the doctor is compelled to specialize, the nurse, too, often finds it proper and necessary to limit herself to certain lines to perfect herself in certain details. But she cannot avoid going to still other lines of work. From her training, she now becomes a chef, a housekeeper, a manager of an asylum, sanatorium or other great institution in which executive and administrative capacity is especially required; she becomes a school nurse, a health inspector, a factory or sweatshop nurse, milk station manager or assistant, insurance nurse, anesthetic nurse, operating room nurse, hydrotherapist, clinical laboratory assistant, social service expert; a charity aid organizer, the organizer of complex and extensive movements in times of war, flood, pestilence, and other calamities."

But, in addition to this expansion into innumerable specialties, there are several influences at work within the old familiar branches which put a greater demand on every nurse. The increased elaboration of technic, the radical change in the conception of disease, the methods of treating it, as we see in the cases of yellow fever, typhus, malaria, typhoid, pellagra, uncinariasis, etc., in which the sanitary as well as the therapeutic knowledge of the nurse is made to serve new concepts of the cause and transmission of these diseases, are well developing new duties. All these, unknown to the graduates of the earlier schools, and many other developments, have called for a revision of the curriculum in preparing the nurse of today and tomorrow.

Granting that all the numerous specialties which we have mentioned are vastly expanding the domain of the nursing profession, and making it more attractive to the great mass of educated and desirable women, it is still a question how the hospitals and the training schools can adjust themselves to the new and difficult demands put on them. The problem presents itself in two ways—how is the curriculum to be arranged so that the matriculates, once accepted, may be given the benefit of the most systematic and logical instruction in the fundamentals; and, secondly, how can they be best prepared toward the end of their hospital and school term, so that they may be given elective courses if they choose to adopt as their final objective any of the specialties in executive or administrative work, public health, social service, teaching, etc.? This evidently can be done only by the establishment of central schools, or, still better, by an alliance of the training schools which already exist with universities, where all the preparatory, as well as elective or post-graduate, instruction may be given most conveniently and advantageously. The importance and urgency of this problem is well reflected in the reports of your collegiate committee, in the papers of Miss Louise Powell (Trans. 1895, p. 107) on "Existing Affiliations Between Training Schools and Uni-

versities," and in Miss Sophia F. Palmer's excellent paper, "On the Power of the Professional Press" (Trans. 1915). This need of the complete reorganization of the method of training nurses has been apparent to all of us as medical men, as it has been to Miss Palmer and to all your great leaders for many years. In 1912, in an address to the Touro nurses, I advocated the establishment of central schools, or, preferably, affiliation with the universities, and I am glad to observe that she has taken up the question independently with her accustomed vigor and intelligence. She believes in the establishment of simple schools for the preliminary and the theoretical training of nurses, where candidates shall be prepared in all the departments which do not require actual hospital experience, thus relieving the hospital of all responsibility of training, with the exception of all those things that require actual administrative experience; where pupils from all hospitals, large and small, general and private, and for the insane, shall receive the same preparation, just as the physician is prepared for a medical school by an adequate term of service in the hospital before the granting of a diploma by the college and a certificate of registration by the state. In this way not only the ideals of a nurse's training could be more surely realized, but the administrative and hospital staff, as well as superintendents, would be relieved of a grave and burdensome responsibility, which is, at best, and with the most sincere intentions, most inadequately discharged. At the present time the superintendent of a nursing school is already overburdened with her own legitimate hospital duties—economic, administrative, disciplinary, and social—to permit her to discharge continuously and efficiently the duties of class-room instruction.

While in the discharge of her administrative duties as superintendent in the larger hospitals she is aided by some of her equally hard-worked assistants, she is helped by the doctor of the staff, who take time they can ill afford for gratuitous teaching, and yet who are expected to discharge their duties with the punctuality of regularly paid instructors. Those of us who have taught in training schools know how cheerfully and willingly the medical man is ever ready to aid and cooperate in the training of a nurse; but we must also admit that, in spite of our good-will, this work is most unsatisfactorily performed, often in a way just as unsatisfactory to the instructor as to the instructed. It is unreasonable to expect a busy doctor to refuse an interesting and remunerative out-of-town consultation rather than put off an important lecture, which, when postponed, plays havoc with a closely regulated and scheduled course of study. And yet a superintendent can scarcely be so ungracious as to remonstrate against this attitude to one whose favor and good-will is essential to the welfare of the hospital with which she is connected. But the greatest objection is that the corps of lecturers and teachers of training schools are most often themselves tired men, whose energies have been sapped and exhausted by the routine of their day's labor by the time that the bell rings for the discharge of their teaching duty to their pupils. On the other hand we, who have taught, best understand how difficult it is to impress the mind and to absorb the attention of the weary brain of the unfortunate pupils who must sit down at attention at the close of a twelve-hour day of the most strenuous and trying physical, as well as mental exertion at the bedside. The remedy for this unfortunate state of affairs is plain enough. It is for the nurses themselves and their leaders to secure the cooperation of the superintendents of the training schools and of others in control of their education, and to apply to the universities and to medical schools and ask these to

establish departments for the training of nurses which shall be empowered to grant a degree such as that of "Graduate in Nursing," as is conferred by the University of Minnesota and other institutions of learning. To bring about such a complete change, Miss Palmer believes that "the public must be educated, the hospital, the medical public." She seems to apprehend greater difficulties in the accomplishment of this purpose than are now apparent to me, but she has in view the establishment of independent central colleges, endowed by the state or by private subscription, which, of course, would be a very different matter from securing affiliation as a department in a fully equipped and established university. If this step could be accomplished, you would have done more to bring your profession abreast of ours than has been done in all the decades that you have traveled since the Reverend Theodore Fielder founded the historic home for the Deaconesses at Kaiserwerth.

But this is no idle dream; this ideal method of educating nurses is not only a possibility, but a tangible reality, demonstrated by the success of the well-established Waltham School for Nurses in Massachusetts; by the success of schools for nurses with preparatory courses at Science College, Boston; Drexel Institute, Philadelphia; the Toronto Territorial School, the Kansas State Agricultural College; by the universities of Michigan, of Iowa, of Virginia; Washington University, St. Louis; and George Washington University, of Georgetown; and by that most complete and typical model of the nurses' colleges, the University of Minnesota, in 1909. I should not fail to mention the nurses' training schools attached to the universities of Indiana, of Missouri at Columbia, of North Dakota, and last, but not least, the Teachers' College at Columbia, established in New York in 1909. All of these apparently recent creations present different types of organization, different curriculums, and variable conditions for admission, but they all agree in the collegiate character of the work, and, with few exceptions, in the high standards required for matriculation, and especially in the fact that a responsible university is back of the school and back of the education given to its nurses, just as it is for its teachers, doctors, lawyers, engineers, etc.

I agree with Miss Powell, from whose excellent report in the Transactions of 1915 I have quoted many of these references, in saying "our universities all over the country, especially those supported by the taxes of the people, owe it to the public that they should take a hand in the training of so important a public servant as the nurse is getting to be."

I am satisfied that if a carefully digested plan for the establishment of such a school were submitted by the authorities most nearly concerned in this problem to the president of Tulane University or to the dean of the Medical School, such a proposition would be given earnest and sympathetic consideration.

In all that I have said I have dwelt largely on the benefit of organizations that have for their aim the betterment and the uplift of the nurse and the increased happiness of womankind as well, and for this reason I am a sincere advocate of your local, state, and national societies. I have also been thoroughly converted to the view that the nurse's function is no longer a merely specialized occupation, a vocation, or an art, but that it is a profession, with all the attributes that go with it; and, having advocated this much, I can accept no other view of the nurse's preliminary qualifications than those which befit and are necessary for the proper understanding and exercise of a dignified professional life. For this reason I am in hearty

sympathy with your efforts to secure the best educated women, the high school graduate and the college graduate, as the most durable material with which you are to build the great social edifice that is represented by the nursing world, and that is to stand as one of the greatest accomplishments of the twentieth century—the professional trained nurse.

Among the problems that are still awaiting solution, the great needs of your guild are: that all training schools for nurses in America shall adopt uniform standards for matriculation and graduation. You need a reform in the length of the practical hours during the period of training; you have thoroughly considered this subject, and we all must agree that eight hours of direct practical work, instead of twelve hours, is not asking too much. You need, urgently, a society corresponding to an insurance company adapted to your peculiar needs and that shall protect you in the days of misfortune and infirmity, which come soon enough to the most devoted and best of you; you need a careful investigation and careful survey of the new specialties that are now multiplying at a prodigious rate, and that are being coupled with your profession, in order to determine their true relations to a nurse's education. Some of these are so far removed from the original purpose contemplated in the nurse's curriculum—such as clinical, chemical, bacteriologic and pathologic laboratory assistants, anesthetists, and radiologists—and, in fact, are so removed from the original purpose of a nurse's education that they cannot be considered as integral parts of it by the longest stretch of the imagination. They only serve to embarrass and clog the curriculum. There is plenty of room for all these specialties, and they offer admirable inducements to the highest class of educated women, as they do to properly qualified men, and no one is more heartily in favor of interesting properly qualified women in these branches than myself, but the best training schools or post-graduate schools cannot fit women for them unless the nurses are satisfied to be relegated to the mere role of helpers and subordinates under the supervision and control of their fully licensed employers. Medicine offers the best opportunities to properly qualified women who wish to enter these thoroughly differentiated specialties. It gives them not only a dignified work, but opens the doors for an independent and remunerative existence. Anxious as I am to see the best intelligence and culture seeking admission into the nursing world, I feel that, in the zeal to secure the best material, courses will be opened to nurses or inducements offered them which are in no sense related to their proper calling, and which can only tend in the end to disappointment and unhappiness. The question of financial and social compensation for the great sacrifices in money and time that are involved in obtaining high academic and collegiate qualifications is undoubtedly a great bar to many eligible and desirable women who would otherwise seek admission to your ranks. No one has presented this important phase of the nursing problem better than Miss Isabel Stewart in her admirable analysis of the reasons why so large a majority of high school and college graduates fail to consider and recognize the opportunities offered by nursing as the life work of an educated woman. I fear that in her report she has failed to lay stress on one important reason, a practical business reason, which has been admirably presented by Miss Ruth Sherman in her excellent paper on "Education and the Earning Power" (*American Journal of Nursing*, March, 1914). The advantages of the trained nurse's career from the practical business point of view furnish abundant food for reflection, and, to my mind at least, is one of the

obstacles to be overcome, more urgently even than those presented by Miss Stewart in her impressive report of the vocational guidance committee last year at the San Francisco meeting. It is indeed a matter for the serious attention of your excellent collegiate and publicity committee, who by its past efforts has shown extraordinary ability to cope with existing difficulties. The committee is most competent to deal with this undoubtedly grave obstacle to the enlistment of the desirable college and high school graduates in your ranks. When adequate compensation and independent livelihood—not only financial, but social and professional—shall be found for the high school or college graduate, the difficulties now in the way of enlisting their interest in the nursing profession shall cease as if by enchantment, and no publicity committee will be required to advertise or urge the advantages of the nursing profession.

Another problem, which is one of the greatest interest to the nursing and the medical profession, is the proper nursing of the great middle class of people. Your thoughtful president, I am glad to observe, devoted a considerable part of her presidential address to this vital subject at the St. Louis meeting. Her suggestions are timely and wise, but, for obvious reasons, still leave this much controverted question in the same state of doubt and uncertainty as it has been in past years. It seems to me that the only solution to this problem lies in a proper classification and grading of nurses according to their different capacities and special qualifications.

These, and many more, are the problems which mutually interest the medical profession and the nurse. I have merely skimmed over the surface of some of these without attempting, or even hoping for, their immediate solution. All that I could hope to do tonight was to show how much your problems concern us and how we doctors must join hands with you in the effort to overcome the difficulties in the way of their solution. In this rambling talk I have far exceeded the limits I had originally assigned myself. I trust you will indulgently interpret my trespass solely as an evidence of my enthusiasm and good-will in the success of your great cause. In this connection I am reminded of a recent story told by a speaker who was placed in a similarly apologetic position. President Hadley, of Yale, when asked by the speaker how long he should talk, replied, "That is at your discretion, but there is a tradition here that no soul is saved after twenty minutes."

I fear that the hands of the clock have long passed the salvation point, and I can only hope for my salvation through your benevolent and generous intercession. At the risk of forfeiting further claims on your indulgence, I cannot leave without a final word of personal and heartfelt appreciation of the great good your splendid meeting has accomplished, and how I, as one of the senior members of the medical profession of this city, feel that I can most cordially voice their sentiments in renewing the invitation, with the hope that you may come to us soon again, and often.

Plans have been prepared for a hospital to be erected at Mandan, N. D., for Dr. A. F. Schierbaum and Dr. H. A. Brandes, of that city. The building will be two stories high above a basement, and will occupy a ground space 30 by 87 feet. On the first floor there will be five private rooms, two wards, private office, waiting room, dressing room, operating room, x-ray room, rest room, and sterilizing room. The second floor will have ten private rooms for patients and nurses and one ward. In addition to the heating plant, the basement will contain janitor's quarters and kitchen. The cost of the building, exclusive of equipment, is expected to be about \$15,000.

SOCIAL HYGIENE VENEREAL DISEASES

Conducted by WILLIAM F. SNOW, M. D.,
General Secretary, The American Social Hygiene Association.

Please address items of news and inquiries regarding Social Hygiene to the editor of this department, 105 West Fortieth street, New York City.

Opinions on Sex Education

It may be fairly claimed that education in sexual physiology and hygiene conduces to health and physical morality by inculcating the ideal of a clean mind in a sound body, and by teaching that the reproductive function is given for a higher purpose than mere sensual gratification—that it should be restrained by reason, regulated by self-control, and exercised in the legitimate way imposed by marriage. I hold it to be a cardinal sin against youth to deny them that knowledge which would safeguard them against ignorant exposure to dangerous infections, the existence of which many of them do not realize and the significance of which none of them fully comprehends.

This education, to be salutary as a safeguard, should be given in youth, for it is at this period that the foundations of the sexual character are laid and habits of mind and practices are formed, which, in a great measure, determine the future sexual life of the individual.

PRINCE A. MORROW, M. D.,

Founder of the Society of Sanitary and Moral Prophylaxis; First President of The American Federation for Sex Hygiene, now The American Social Hygiene Association.

In its educational propaganda, however, the association will necessarily proceed conservatively and gradually. It recognizes the obvious fact that it is quite impossible, even if it were advisable, to introduce instruction in social hygiene into the public schools, except to a small degree, and with great reticence. It believes that instruction in sex subjects should never be given to the two sexes together after the age of puberty, and that none but obviously high-minded teachers should even talk with pupils on these subjects. It believes that parents, if adequately informed, are the best persons to teach the elements of parenthood and sex relations to their children.

It means to carry on its work without impairing modesty and becoming reticence in either young or old, and it hopes to promote, by all its activities, genuine innocence and purity, and the sanctity of family life.

These being its objects and aims, and its conception of public service in the field of social hygiene, the association invites men and women in every part of the country who are of this mind to become members of the association, and to support its work.

CHARLES W. ELIOT,

President Emeritus of Harvard University; President of The American Social Hygiene Association.

In view of the sudden and general discussion of this topic, it should be understood that cautious progress is alone to be recommended. Sex education in schools is a new thing, and there has been very little actual experience with it either in Europe or America. Mere knowledge of functions is not likely to govern conduct. Character de-

velopment must accompany information. The entire subject must be handled with the utmost delicacy and in a distinctly experimental spirit. No general class-room instruction is, at this stage, to be recommended on the basis of successful experience anywhere. Personal conference with younger children, tactfully conducted by parents and teachers, seems the most feasible procedure.

ABRAHAM FLEXNER,

Assistant Secretary General Education Board.

Sex education should be understood as including all scientific, ethical, social, and religious instruction which aims to help young people prepare to solve for themselves the problems of sex which inevitably come to every normal individual.

For emphasis, let me briefly summarize these aims of sex education: (1) serious, scientific, and respectful attitude of mind on sex questions; (2) personal sexual hygiene; (3) social, ethical, and eugenic responsibility for

THE QUESTIONING CHILD

He asks about and learns the laws of

FIRE

"What makes the fire burn?"

and of

GRAVITY

"What makes the cup fall?"

These intricate laws are explained to him in a simple way

BUT WHEN HE ASKS

"Where did the baby come from?"

He is told not **FACTS** but **FABLES**

Fig. 1.

sex actions; (4) relation of immorality and social diseases. I have deliberately placed these educational aims in this order because it is the order of greatest permanent importance in the sex education movement, it represents the greatest value to the largest number of individuals who may learn the scientific truth, and it is the order most natural, most logical, and most effective in pedagogical practice with young people.

We should stand for the scientific instruction of all young people in matters concerning sex because it is certain that such knowledge will function completely in many lives and will work appreciable good in many others.

Sex education deals with problems which the normal human life cannot possibly avoid and which each individual must be prepared to solve for himself. Therefore, we may confidently assert that instruction concerning the most important aspects of sex processes and relationships has come to stay, and that it will soon be recognized as an

absolutely necessary part of a rational and efficient scheme for the education of young people.

MAURICE A. BIGELOW,
Professor of Biology Teachers' College, Columbia University.

The situation as to sex instruction emphasizes, among others, two things:

1. It emphasizes the need of making adequate provision for the training of teachers to give such instruction. All normal schools should provide it, and all colleges and universities should organize courses in their departments of education in which the subject may be thoroughly treated in the light of a broad background of knowledge of biology, physiology, sociology, and ethics.

2. It emphasizes the necessity of providing instruction at public expense in this subject, as already pointed out, for parents. This is the most effective way to create a public sentiment which will support any form of such instruction which experience may prove to be effective in elementary schools.

One of the most important results of sex education, in

the need for that control arises. The difficulties are great of arousing unduly the mind to dwell on the subject, of causing needless alarm or depression, or of overstimulation. Nevertheless the risk is worth taking, and better a year too early than an hour too late.

Certain general principles underlie the presentation of sex instruction by teachers:

1. It should present normal relations rather than the pathological, the sane and happy and not the diseased and abnormal.

2. It should be constructive and positive in plan, and not critical and negative. It should aim to build up and conserve those normal inhibitions of reserve, modesty, chivalry, and the normal allegiances of lovers, husbands, and wives, and of parent and child. It should say *do* and not *don't*.

3. It cannot be divorced from moral and ethical motives, and might well be strengthened by religious ones also.

These considerations make it at once evident that in the whole field of ideas, ideals, standards, and philosophy of

INTERPRETING THE FABLE OF THE STORK.

The untaught child learns one version thus:



BUT

false
The price of information is loss of —→

AND

Its purchase results in —→

Modesty
Reverence
Purity

Disrespect for manhood and womanhood
Recklessness
Unchastity of mind and body

Fig. 2.

the case of adults as well as of children, is the giving them a decent vocabulary in which to discuss the subject of sex and sex hygiene. The terminology picked up in the street is the only terminology with which all but educated adults are familiar, and it is the only terminology which children hear who get their knowledge of sex from impure sources. The terminology of science is the only terminology that is free from indelicate associations, and the very first condition of success in sex discussion, either with young people or with adults, is to give them a vocabulary free from these associations.

THOMAS M. BALLIET, PH. D.,
Dean of the School of Pedagogy, New York University.

We must endeavor to find an adequate and efficient means of imparting to the child at suitable times in his development such revelations of the sexual life as will conduce to his normal knowledge and control of himself as

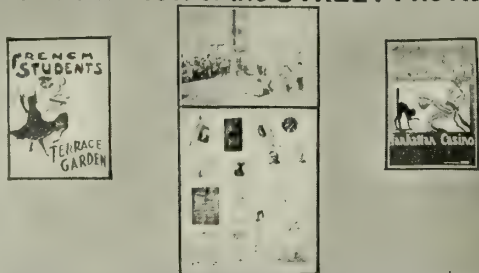
life inculcated by instruction in the child, all teachers of the school have some part. Literature, art and history contribute ideas, and establish ideals of the right and wrong relations of the sexes. Language has words with sexual relations; mathematics and grammar develop the sense of relations; manual training, domestic science, and athletics fill the hours and the mind, as well as train hand, muscle, and nerve to normal, healthful functions; the sciences all inculcate in the mind of the child the idea of nature ruled by law. It is thus possible for every teacher to contribute something toward a sane mind in a sound body and a mind not morbidly saturated with sexual ideas, but normally and naturally cognizant of some of the highest ideals of the relations of the sexes before and after marriage.

It would seem to the writer that, in so far as possible,

PRESENT OPPORTUNITIES FOR SEX EDUCATION

- ¶ Parents and Kindergartens are generally silent
- ¶ Grammar Schools teach sexless biology and physiology
- ¶ High Schools do not meet the normal needs of adolescents
- ¶ Universities and Normal Schools are dangerously indifferent

The EDUCATION of the STREET PROVIDES



Is this education adequate preparation for Marriage and Parenthood?

Fig. 3.

the subject of sex and sex relations should be treated casually and incidentally whenever possible in normal connections in all subjects where ideals, duties, and standards can be emphasized, and that it be robbed of its malodorous secrecy with all the discretion possible.

C. A. KOFOID, PH. D.,

Professor of Zoology University of California.

The educational phases of social reform are of most immediate importance. Nothing can so profitably occupy the attention of social hygiene societies as the education of the public. If groups of social workers come to serious disagreement on other phases of the present emergency, if the discussion of restricted districts, minimum wage laws, health certificates for marriage, and reporting of diseases divide the group into warring camps, all can unite in favor of spreading certain truths as widely as possible; and it is not difficult to agree on at least a few of the many methods which have already proved effective in educational campaigns.

WILLIAM T. FOSTER, PH. D.,

President of Reed College.

But the elimination of disease and prostitution cannot be attained solely by the enforced registration of venereal diseases, the raiding of disorderly houses, and the enactment of laws against procuration and solicitation.

The real strength of the social hygiene movement of today lies in the cooperative activities of the great religious, social, and educational organizations. They are striking the evil at its source; not by driving the prostitute into the street and then out of it again, but by preventing our young girls from becoming prostitutes, and our young men from preying upon them. This they hope to achieve by informing the mind so as to banish prurient curiosity, by diverting the imagination to emotions joyous and clean, by exercising the body in playgrounds and dance halls that are safe, and, above all, by inspiring the soul with the highest religious and family and civic ideals. To turn lust into love, "into the enthralling love of mate for equal mate, into civic love for freedom, home, and state, into the eternal love of God and of all things create"—such is our aspiration.

EDWARD L. KEYES, JR., M. D.,

President of the Society of Sanitary and Moral Prophylaxis.

The question of teaching sex information in the public schools is on the firing line, and no one can say what may or may not be wisely given. Experience has generally shown little to be gained by forcing legislation in advance of forming public opinion. Similarly, history shows the same observation to be applicable to attempts to introduce, by legislation or otherwise, the compulsory teaching of physiology and hygiene in the public schools in advance of training teachers in these subjects. It is the consensus of opinion that sex education is necessary, and that the chief part of such instruction must be given by others than the parents, but it does not follow that the schools can immediately do this work. Ultimately this subject, like all important subjects of education, will find its place in the public school curriculum through distribution in the various scientific and ethical courses adapted to its purpose, and in well-planned special lectures by experienced educators. In the meantime, patience is necessary. Here and there well-planned efforts are being made and should be observed closely. Good work should be promptly recognized and encouraged, but Mr. Abraham Flexner has well said, "Swapping absolute ignorance for misinformation will avail the people little." Much of the educational effort of the day accomplishes only this result.

WILLIAM F. SNOW, M. D.,

General Secretary The American Social Hygiene Association.

DEPARTMENT OF LIFE EXTENSION

The Medicine Habit

BY EUGENE L. FISK, M. D.,

Director of Hygiene Life Extension Institute, Inc.

For a young and supposedly vigorous and healthy nation, our drug bill is enormous. If the quantity of medicine a citizen takes is any index of his physical condition, then this nation needs to take thought of the stamina of its people. A drug-taking nation is no stronger than a drug-taking man, and a drug-taking man is not very dependable, either in the factory or on the firing line.

Five hundred million dollars is the estimated expenditure for drugs in this country, most of which are self-administered. Into the delicately adjusted machinery of the human body is yearly poured at least 75,000,000 pounds of drugs and chemicals, haphazard, with no real knowledge on the part of the users of what the mess is going to do to that machinery.

We have cold cures, headache cures, consumption cures, cancer cures, liver pills, kidney cures, spring tonics, blood purifiers, ague cures, rheumatism cures, cures for everything except the credulity and physical neglect that make possible this enormous expenditure for drugs that are in the vast majority of cases useless when they are not harmful.

Since 1880 the expenditure per capita for patent remedies consumed in the United States has risen from 33 cents to \$1.54. That the health of the nation has deteriorated to the degree suggested by these figures seems impossible, but they are in line with other evidence suggesting that national vitality is waning in later life, and that chronic disease, which is most likely to induce the taking of patent remedies, is on the increase. It is safe to say that most advertised remedies for chronic disease are actually harmful in such conditions. Take kidney cures for example: if they have any effect at all, it is that of stimulating the action of the kidneys, of overworking a diseased organ instead of resting it, as can be done by proper diet. Physicians are now very cautious about giving remedies that have any specific action on the kidneys.

Liver pills (they don't act on the liver) are usually distinctly harmful in the conditions for which they are taken—sluggish bowels. Once a liver pill taker, always a liver pill taker, is the rule. A condition which often can be readily corrected by proper diet and exercise is thus rendered chronic and sometimes almost incurable by remedies advertised to relieve it. Biliousness is a "bugaboo." Bile has nothing to do with the "dopey" feeling that has been given the name.

Legislation has done something to mitigate these evils and prevent to some extent extravagant claims for these ready-made remedies, but the enormous development of advertising methods has contributed to put into the public mind this widespread suggestion for drug indulgence. Not everybody who takes patent remedies is ill. But few people have such superabundant health that they are not willing to take a chance on being made a little better if

it can be done so easily—just a teaspoonful or tablespoonful three times a day, or just a little pill after each meal.

One of the absurd customs in this grand drug debauch of the nation is that of taking "spring medicine." The ingredients of most spring medicines are for the most part inert and useless flavoring matter, such as sarsaparilla. Unfortunately, such remedies often contain a heavy percentage of alcohol and are to that extent injurious. There is no physiological need of spring medicine, but there is often need for hygienic precaution as external changes in the weather prevail. People who are overdressed all winter naturally feel languid when the first warm days come. Proper clothing habits will prevent much "spring fever." Those whose bodies are poisoned by overfeeding or sluggish bowels, or whose nervous systems are depressed by lack of sleep, by alcohol, or other unhygienic indulgence, naturally feel the depression of the early warm days and may be tempted to the drug counter for tonics, liver regulators, blood purifiers, etc. Not the least harm that such vaunted remedies do is to deter the individual from seeking the advice of a physician or correcting the faulty living habits which are usually responsible for the "out of sorts" feeling.

If you think you have ague or malaria, go to a physician and have your blood examined, and, if quinine is needed, he will intelligently govern its administration. Enormous quantities of quinine are annually consumed in this country—about 2,000,000,000 doses. Much of this is not needed, and much of it is harmful, while in many cases it would accomplish great good by intelligent administration.

If you think you have anemia, or that your blood is disordered, do not make the diagnosis from a patent medicine circular, but have your blood examined. If there is anemia, the physician may order an iron tonic, but he will rely more on fresh air and proper exercise and food for real results.

Another misuse of medicine supposed to be beneficial, or at least harmless, is the taking of mineral waters. There is a suggestion of nature's remedy in a mineral water which makes a strong appeal. Waters that are not purgative or laxative sometimes do good simply because they contain water, which may be greatly needed. Often water from the hydrant will prove just as effective if taken regularly and with confidence that it will do good. Purgative and laxative waters, if taken regularly, tend to inflame the bowel, and the same applies to "salts." Fortunately, such simple remedies as agar agar and mineral oil are coming into use and displacing the absurd array of pills and purgatives which have been so much abused. Mineral oil is not entirely without possibilities of harm. If taken several times a day after meals, it may interfere with the digestion and absorption of food. If taken late at night, it is less likely to do harm. The main reliance for this intestinal laziness should be proper diet, bulky green vegetables, whole cereals, bran water between meals, fresh air and exercise, and in some cases bowel irrigation.

The enormous sale of headache remedies is another illustration of our inability as a nation to bear pain. It is so easy to take a pill or powder, and away goes the headache! But the effect is produced by drugs that weaken the heart. The common use of such remedies may cause serious heart affections, besides masking the underlying conditions that are the real cause of the headaches, such as eye strain, head infection, intestinal absorption, or even serious organic impairments, which the use of headache remedies only aggravates.

One of the most dangerous and widely abused remedies

for headaches, often taken in conditions where the heart and kidneys have been weakened, as after alcoholic excess, is bromoseltzer. In some of the leading hotels "quarter-in-the-slot" machines are placed in the bath rooms with packages of this remedy, along with some exceedingly useful and hygienic articles, as tooth paste, tooth brushes, and razors. Bromoseltzer is heavily loaded with a coal-tar product. It is unsafe for anyone to use except on a physician's prescription, and it is in the class of habit-forming drugs. Sleep-producing drugs, such as veronal, bromides, sulphonal, trional, are also to be avoided, and never taken except on the advice and prescription of a physician. In many cases headaches can readily be relieved by proper hygiene, by rest, by abstinence from food until intestinal poisoning is corrected. A cold compress on the head, rest in a dark room, or rubbing the forehead with a menthol pencil or menthol salve will often relieve a headache, and the patient is invigorated and restored, while the use of a headache powder would simply bring depression and some form of injury that cannot at the time be measured or appreciated.

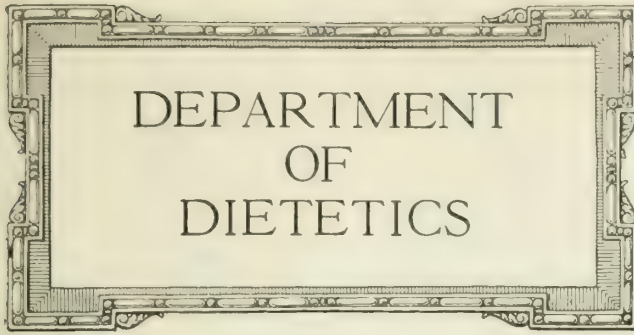
Another fertile source of revenue for those who prey on the sick and half-sick and the gullible are rheumatism cures. Genuine rheumatism is caused by infection, by bacteria that travel through the tissues. Liniments are merely palliative; they cannot "cure" such conditions, and lithia, so widely advocated, is of no value. Rheumatism is not due to uric acid, and most remedies advertised for such conditions are useless, if not harmful. The source of the infection should be sought, whether in the tonsils, tooth-sockets, ears, nose, etc., and the focus of infection removed.

When simple remedies do not relieve pain, we should seek trained medical assistance. Instead of spending money for remedies which our common sense should tell us are mere catch-pennies, we should spend more time and money in avoiding illness. One visit a year to the physician for keeping well may save many visits for actual illness. It costs less to "keep well" than it does to "get well."

The Porter's Beer Is Gone

An old custom that may be regarded as doomed has now been discarded at Worcester Infirmary, England—that of supplying the head porter and his assistant with beer. The change made last month took the form of the following resolution, which was agreed to on the recommendation of the house committee: "That increases of salary be given to the head porter (W. Bateman) and the assistant porter (W. J. Vaughan), the former to have £45 a year instead of £40 and the latter £24 instead of £20." Everything is found for both officers, including one suit of uniform, except beer. Mr. Park, who presided at the meeting, said that it is no longer the custom to supply the staff of institutions with beer, and he proposed its discontinuance. In reply to questions, Mr. Park said that the committee preferred to regard the increase as not in lieu of beer, though that is what it amounts to. The discussion is worth recording as a minor event in hospital history—the passing of the porter's beer, an event at one time that would have sounded incredible.—The Hospital.

Plans for the \$100,000 central emergency hospital, which the city of San Francisco proposes to erect, call for a two-story structure of reinforced concrete, containing wards for thirty regular patients and twenty persons suffering from mental derangements. There will be a court room for the disposition of the latter, as well as operating rooms, administrative offices, etc.



Conducted by MISS LULU GRAVES,
Dietitian of Lakeside Hospital, Cleveland, Ohio.

Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, Ohio.

The Recent Cornell Meeting

The Home Economics Association held its annual meeting at Cornell University, Ithaca, N. Y., June 28 to July 2. There were two sessions of interest to dietitians.

The institution section gave the following program Wednesday, June 28: "Students' food service at a dormitory table"—Elizabeth Goodrich, Simmons College, Boston. "Psychology of dainty food for students"—Bertha Shapleigh, Teachers' College, Columbia University, New York city. Discussion, "Problems connected with students' food"—Isabel Ely Lord, Pratt Institute, Brooklyn, aided by Alice Loomis, University of Nebraska, Lincoln; Anne D. Blitz, dean of Women, William Smith College, Geneva; Mary Uri Watson, McDonald Institute, Guelph, Canada. "Organization of service in a new cafeteria"—Blanche Geary, accounts and finance, Y. M. C. A., New York city.

The program of the science section included several papers of especial value to the dietitian who is doing work in metabolism. The meeting offered an excellent opportunity for us to find out what others are doing, and this program was unusually helpful: "The digestibility of starch as affected by various processes of cookery"—Amy Louise Daniels, University of Wisconsin; "Practical ways of increasing the iron content of the diet"—Caroline L. Hunt, office of nutrition investigation, Department of Agriculture, Washington, D. C.; "Standardization of cooking temperatures"—Louise Stenley, University of Missouri; "Recent contributions to knowledge of mineral metabolism"—Grace McLeod, Pratt Institute; "The new dietetic treatment of diabetes mellitus"—Lena F. Cooper, Battle Creek, Mich.; "Recent contributions of bacteriology to the home"—Josephine Kerr Allison; "Creatin and creatin excretion"—Emma B. Wagner.

Miss Daniels exploded some of the theories which many have long held with regard to digestibility of the starch grain as affected by cooking. She stated that they found the percent of undigested starch in pancakes was no greater than in bread. This is contrary to the belief of the majority of people in the past and is a surprising fact. She said also that they found crackers varying greatly in digestibility, some of them being not at all suitable for infants.

Miss Hunt, of the office of nutrition investigation, Washington, D. C., modified her subject to read, "Practical ways of increasing the iron content of the diet, if that seems desirable." She gave us chiefly of her personal experience in using a diet containing 30 milligrams of iron and furnishing but 1,800 calories of energy, whereas the ordinary 3,000 calories diet contains but 15 milligrams of iron.

Miss McLeod's paper was full of information given in a most interesting manner. It would be difficult to mention any particular part of it, as one would want it all in order to get the successive steps and relations in our "present" knowledge of mineral metabolism.

Miss Cooper gave a most simple and comprehensive description of the most recent method of treating diabetes. She mentioned the difficulties as well as the advantages. Anyone could readily understand the treatment, whether they were or were not familiar with the ordinary methods or details of the disease.

The other papers were equally good, but not of such specific interest to the hospital work as were those mentioned. It is to be hoped that the science section and the dietitian section may be combined and their programs made out with that end in view another year.

Round tables and business meetings were held, at which considerable interest and enthusiasm were shown by the dietitians in regard to forming a permanent national organization. Then, too, there seems to be a need for some way of distinguishing the various types of dietitians. We have the hospital dietitian, the school dietitian, the dietitian in charge of cafeterias and lunch rooms, and there is just beginning to be a demand for the consultant dietitian. In each of these lines the work is different, and the preparation as well as qualifications of the dietitian in each case should be quite different. Much confusion exists, not only in the schools offering courses for dietitians, but also among the people who are employing people in these various capacities.

Interest in Dietetics

It is much to be regretted that those who are interested in dietetics and dietotherapy have no publication in which their problems may be discussed, or through which they may learn what is being done by others in the same field of endeavor. The medical profession has so recently recognized the value of diet in disease that nothing yet accomplished is considered final. During this period of development new decisions are constantly being formed and results of various experiments are being discussed. This department will be more than pleased to publish anything of this nature which is of general interest.

If you have some method of service particularly helpful, will you not tell us about it? If you have found some book of special interest, or some piece of equipment which has met your needs particularly well, will you not share it with the rest of us? In the July and August numbers of THE MODERN HOSPITAL we have had the privilege of learning something of what is being done in one of our largest hospitals and in one of our large factories. I am sure we have all been glad to know what Miss Eckman and Mrs. DuGuay have told us, and we shall be equally glad to know what others are doing.

At the national convention at Cornell the question arose, "What can the dietitian do for the dispensary patient?" Her duties are too numerous for her to give any time to this work herself, yet the physicians in the dispensary are calling on her frequently for help. In a few hospitals a consulting dietitian is employed, but these are very few as yet. The nurse, in her regular course, does not get sufficient training in dietetics to enable her to be of much help, and the visiting nurse is no better equipped. If any of our leaders are meeting this problem in a way that is satisfactory, or even partially so, we should be glad to know about it.

A few things of significance to our readers have occurred during the summer, and we are calling attention

to them in a brief way this month. The annual convention at Cornell was attended by a few of the dietitians of the country, who indicated an ambition to promote the interest of all of us. It is to be hoped that this meeting will gain in popularity to such an extent that a wider section of the country may be represented.

The exposure of the Westfield movement is gratifying to some of us who have felt all along that it was purely an advertising scheme. The decision in regard to corn syrup should mean much at this season, when the price of sugar is so high.

"The Westfield Standard"

The town of Westfield, Mass., has been basking in the sunlight of popularity which it acquired through the activities of Lewis B. Allyn. The town itself had no part in bringing about this popularity other than the passive state of its board of health. No pretense was made by the town to have either the scientific knowledge or equipment to establish a standard of pure foods.

Mr. Allyn, however, has been advertising very widely the "Westfield Standard," not only in printed matter, but by traveling about the country holding pure food exhibitions and giving demonstrations of pure food products. Through the efforts of Senator Sheehan, who represents the senatorial district in which Westfield is located, an investigation was begun, which soon brought to light the falseness of the "Westfield Standard."

The August number of the *American Food Journal* gives an account of the investigation, which offers evidence in proof of what it says. A few paragraphs from this article will tell the story very well.

"This advertising scheme found its way into a syndicated list of ninety newspapers throughout the country, where it was run for about twenty-six weeks, and this false doctrine spread accordingly.

"The American Chemical Society, at its meeting last month, unanimously reported on this Westfield proposition as among those movements which are 'altogether wrong in principle and opposed to the best interest of the public,' one reason being because 'almost without exception profiting financially by means of advertising is directly connected in one way or another with such campaigns. The movements are, therefore, not disinterested.'"

"The reports made by the chemist of this board, Lewis B. Allyn, refer to the large amount of work done by the board because of the examination and the determination of the admission of food articles to these lists. Other literature shows that a large number of these lists have been distributed or sold for cash, the claims varying from many thousands to nearly one million copies so distributed. Other literature claims that these lists contain practically all food products that are pure, clean, and wholesome, which naturally implies that practically all food products have been examined by this board and that those not listed are not pure, clean, and wholesome. The facts and information show that this so-called Westfield Standard is only a name given to a preferred list of foods. The foods so listed have not been examined, as is represented, by any scientific test by the Westfield board of health. The method adopted for listing these foods will be disclosed later.

"The Westfield board of health has neither the laboratory facilities nor the employees qualified to make the necessary examinations, nor the money with which to carry out the extensive investigations which should be made in order to ascertain that all the food articles listed comply with the requirements of the alleged standard. It could not have made the necessary investigations to certify that all the foods in the list were 'packed and sold under sanitary conditions,' for such investigations would have cost millions of dollars, and this board, with its three members and six employees, spends only about \$7,000 per annum.

"If he possessed a laboratory equipped for a full and complete analysis of food products, one might be misled into a belief that he knew what he was talking about. But Dr. McLaughlin, the commissioner of health of Massa-

chusetts, reported to Senator Sheehan that the laboratory of the Westfield board of health, in which it is claimed 'Professor' Allyn made his thousands of analyses, contains only 'a Babcock machine, a balance and dishes for the determination of solids and fat in milk, a sediment tester, a still, not yet set up, for the distillation of water, and glassware. The board expects to have a more substantial laboratory in the future, as \$125 has been appropriated for this purpose this year.'

"The man whose verdict is the last word as to the quality of the goods submitted to him knows nothing of pathology, toxicology, or pharmacology, a knowledge of which sciences is necessary in determining the effects of food substances on health, and his knowledge of chemistry is confined to what he has learned at the State Normal School at Westfield. He has never been honored with a degree of 'Doctor' of anything, and he has no right to the title 'Professor.'"

Yet thousands of people throughout the United States have been doing their marketing from the list of manufacturers named in the book published by Allyn, and feeding their families only the "pure products" named in his publication. No doubt these people have been eating pure and wholesome food—there is no condemnation to be given on that score—but there are other products on the market which are quite as pure, though they were not on the "approved" list.

Wheat Flour and Other Flours

BY GEORGE L. TELLER, M. S., Chicago, Illinois.

[Continued from the August issue.]

The lower grades of flour contain more of the outer portions of the wheat berry than do the finer patent flours. For this reason they contain more ash and more protein than do the higher grades of flour. If there is any truth in the contention that the fine white flours contain too little mineral matter and too little protein, it would seem that anything which would overcome the objection to the lower grades of flour as to color would be welcomed by those who are continually urging the defects of white flour because of the lack of mineral matter in it.

It is a well-recognized fact on the part of those who manufacture and use flour that flour from freshly milled wheat has disadvantages both as to color and baking qualities which are overcome by the use of suitable bleaching processes, and millers, by these processes, are enabled to keep their flours more uniform throughout the year, as well as to give a better product to those who use flour. It is true that these conditions improve in the flour with age, but from a commercial standpoint there are many objections to waiting several months after a flour is produced before it can be put on the market and consumed. It requires space for storage, there is danger of injury from animal and insect life, and there is the tying up of a large amount of capital, the interest of which must necessarily increase the cost of the product to the consumer. There is no question that some of the bleaching processes which are in use do materially age and mature freshly milled flour, and at the same time enable the user of the flour to make a better, more attractive, and more wholesome product. No one is injured by its use and no injurious material is put in the flour, and, on the whole, it would appear to be an advantageous and commendable practice.

Wheat flour is the most common bread flour of the greater part of the civilized world, and has attained its place largely because of its peculiar physical characteristics, which make it suitable for producing fermented bread. This peculiarity in physical characteristics lies in the insoluble coagulable proteids, commonly known as gluten, and which gives the well-known characteristics to the dough. The amount of gluten in wheat flour varies in

extreme limits from 5 to 17 percent, the average amount being in the neighborhood of 10 percent. Flours which depart materially from this average amount are likely to give trouble to those who use them, partly because of the common lack of information as to how such flours should be treated and partly because a gluten content somewhere around this quantity appears to be best suited for producing those articles for which wheat flour is used.

From a standpoint of food value and nutrition, wheat flour is not necessarily superior to the flour or meal of other grains, several of which have substantially the same composition as wheat flour. Each of the individual grains has a distinctive flavor peculiar to itself, and thus we can tell by the taste and smell of the flour whether it is from wheat, oats, rye, or Indian corn. Among the American people the flavor of wheat flour appears to be the favorite, although in some sections of the country many of the people are fond of corn bread, and in others people, especially those of some recent European descent, are partial to rye bread.

Rye flour, like wheat flour, may be obtained in the market in several different grades, depending on the manner in which it has been separated in the mill. Here the flours are designated as white rye, medium rye, dark rye, etc. The white rye corresponds somewhat to the straight grade of wheat flour; the dark rye contains even a larger proportion of bran than is ever found in any of the wheat products used for food purposes. Botanically considered, rye is more closely associated to wheat than are any of the other grains used as food. Chemically considered, the wheat flour and rye flour are very similar, but no gluten can be obtained from rye flour in the manner in which it is obtained by washing wheat flour, and the dough is physically of a different character, being more sticky and less rubbery. For these reasons rye flour, by itself, does not make bread which is as porous as that from wheat flour. To overcome this difficulty, it is a common practice to blend wheat flour with the rye flour, the wheat flour being used in various amounts, but seldom equaling in quantity the rye flour used. Rye flour in this country is used largely because of its flavor, which is pleasing to some, but less so to others. In some European countries, especially in Germany, rye bread is extensively used because it is cheaper than white bread. Generally speaking, the amount of protein in rye flour is considerably less than the amount in a similar grade of even the soft wheat flours. The wheat flour commonly used for blending with rye flours in bread-making is of the lower grades—often the first or second clear.

Oat flour is seldom used in this country, the form in which oats are used for human food being that of rolled oats or some form of the so-called "steel-cut" oat meal. The oat product thus produced consists of the entire grain after it has been freed from the husk, which adheres closely to it in its normal condition. Oat meal of all kinds is comparatively rich in both fat and protein, and is an exceptionally valuable food product when used in the form of porridge.

Barley flour is seldom produced in this country. The favorite form in which barley is used here as a food is pearl barley. Barley flour is, however, imported from Europe and sold in the drug stores by the pound at a price approximating \$50 per barrel. The material sold in this way has, approximately, the same composition as a straight grade of soft wheat flour, and the food value of the barley flour is about the same as such wheat flour.

Buckwheat, while not a cereal, yields a flour which is

extensively used for food purposes, but usually in this country in the form of griddle cakes. It has a food value approximating that of rye flour.

Indian corn, or maize, is the one cereal which is native to America, and has been used here as a food product ever since we have a record of any kind.

Corn, like wheat, has three distinct parts—the outer coating, the germ, and that part of the kernel which produces flour.

In modern processes of milling the outer coating is removed as bran, and the germ is also very completely separated from the remainder of the kernel. The germ of the corn is very rich in oil and in protein. When the entire kernel is ground into a meal, the oil has a tendency to become rancid, so that the meal, as produced, has very poor keeping qualities.

Corn flour freed from the bran and germ contains somewhat less protein and fat than an average straight grade soft wheat flour. It contains no adhesive gluten, and for that reason does not make a light, porous loaf of bread like that from wheat flour. The bread made from it is generally not fermented. The food value of corn flour approximates closely to that of soft wheat flour. The protein and fat in it are readily digested, and the starch which makes up the greater part of the remaining material is also readily digested, after the flour has been baked into bread, just as is that in wheat or rye bread. Corn flour is more extensively used for food purposes in this country than in Europe because its value for this purpose is much better understood here than there, and the taste for it appears never to have been acquired by the people of that continent as it has been by people in certain sections of America. No bread from the mixture of corn flour and wheat flour has ever been developed in this country, in which corn flour constituted the greater part of the material, as in the case of rye flour. This is apparently due to the fact that the dough from corn flour does not have the adhesive property of that from rye flour, and does not lend itself so readily to the making of a loaf of raised bread. Corn flour and other corn products are used to a greater or less extent in the making of wheat bread, and there is no reason why they should not be used to a much larger extent if proper means were taken to introduce their use.

During the latter part of the last century corn flour was blended with wheat flour to a large extent in various parts of the country and the blend was sold as wheat flour. Marketed in this way, the produce was a most flagrant example of misbranding and a fraud on the consumer. At that time no adequate pure-food laws were in force in either the several states or in the United States. To remedy this condition, a special act of Congress was enacted, which, due to the breaking out of the Spanish-American War, was incorporated in a revenue measure, and which stipulated that the sale of flours produced by blending products of corn or other cereals with wheat flour must be made under the rules and regulations of the Internal Revenue Department, except when the amount of wheat flour is less than 50 percent. Later, when the revenue law to which this new amendment was attached was repealed, the taxes and restrictions on mixed wheat and corn flour were allowed to remain, and up to this time have not been repealed. The tax is not great, but difficulties connected with the carrying out of the revenue provisions has curtailed much the sale of flour of this kind. A bill is now before Congress which would remove this revenue feature and bring this product under the supervision of the pure food officials. This new bill provides

for the labeling of the product as "mixed flour," giving the percentages of wheat and corn flour, or other flours which are used in the mixture. This would seem to be a wise thing, especially when the cost of living is increasing so rapidly and when any means of reducing this cost should be carefully sought out.

It is the practice of the millers all over the country to blend wheats containing different quantities of gluten in such a way as to keep the amount of gluten constant in the resultant blend; that is, a flour containing a large amount of gluten is blended with a flour containing a small amount of gluten and consequently a larger proportion of starch. The starch of the softer flour is, therefore, used to reduce the proportion of gluten of the stronger flour. To do this the flour must be supplied at wheat prices, which are considerably higher than the price of corn and other materials which may be used for this purpose. This is because it costs more to produce wheat than to produce these other grains. If corn flour or corn starch were used in the blend instead of the softer wheat flour, the cost of the resulting product would be materially reduced, while its bread-making and nutritive qualities would be the same. Not all flours are suitable for blending in this way, but, from a standpoint of economy, those that are should be so treated.

Bread flours naturally contain more gluten than flours which are used for pastry or crackers, so that different kinds of flours are required for different purposes, and for many purposes mixed flour, consisting of wheat flour and corn flour or wheat flour and corn starch, or wheat flour and the products of certain other cereals and seeds, would be preferred to a wheat flour, which would contain too large a proportion of gluten. It is to the interest of the country, as a whole, and especially to the consumer, to use mixed flours when they are of such a nature as to serve

the purpose for which the flour is wanted and when they can be obtained at an appreciably low cost. Since mixed flour is necessarily labeled as such, showing the kind and the proportion of the ingredients used, no one is required to use it unless he sees fit; on the other hand, he should have the privilege to do so when his intelligence dictates this to be the correct course.

Tasty Desserts and Beverages

The mixing of cool and nutritious beverages for sick and convalescent patients during the hot summer months is a problem that confronts the hospital dietitian. Not only must the dietitian consult the physician regarding the requirements of each individual patient, but she must observe all esthetic laws. A beverage, although cool and tasty, if served in a sloppy way, or the glass bears the Bertillon system of finger prints, had best remain unserved, as it will neither appease the thirst nor satisfy the mental attitude of the patient. In no department of the hospital does psychology play so great a part as in the preparation of foods and beverages. A bit of green mint, watercress, or parsley gives a tasty and esthetic appearance to the side dish or glass, and the nurse or dietitian who observes and practices this fact will secure the everlasting gratitude of the sick patient and the convalescent.

Recently a New York hospital caused to be printed and distributed to all nurses a small cloth-backed folder measuring, when folded, 2½ by 5 inches. This small folder contains many good formulas, giving the amounts of carbohydrates, fat, and proteids in grams, and also the calories of a number of summer drinks and delicious desserts. The contents of the folder consist of the following formulas:

FORMULAS FOR DESSERTS AND BEVERAGES

Food formulas	Amount	Carbohy- drate, in grams	Fat, in grams	Proteid, in grams	Calories	Calories per ounce	Ways of serving
1. Milk.....	8 oz.	12	9.5	8.4	160	20	Hot or cold, or as junket.
2. Milk.....	6 oz.	9	6.5	6	120	.....	Hot or cold.
Cream (40 percent).....	2 oz.	1.8	2.4	1.5	240	45	Flavored with tea or coffee or cocoa.
							As junket.
3. Milk.....	6 oz.	9	6.5	6	120	.....	As iced drink.
Cream.....	2 oz.	1.8	2.4	1.5	240	60	Flavored with tea or coffee or cocoa.
Lactose.....	1 oz.	80	.....	.....	120	.....	Flavored with vegetable or meat as soup.
							Flavored with vanilla or chocolate.
4. Milk.....	6 oz.	9	6.5	6	120	.....	To be used as iced drink with brandy or whisky.
Cream.....	2 oz.	1.8	2.4	1.5	240	.....	Cooked as custard or made into ice cream (sweetened).
Lactose.....	1 oz.	30	.....	.....	120	70	As hot soup, flavored as above.
Egg.....	1	.....	5	7	80	.....	
5. Orange juice.....	4 oz.	12	.....	.....	48	12	Preferably ice cold.
6. Orange juice.....	4 oz.	12	.....	.....	48	.....	Serve as iced drink or frozen as water ice.
Egg.....	1	.....	.....	.....	80	.....	
Lactose.....	1 oz.	30	.....	.....	120	30	
Vichy or water.....	4 oz.	.....	.....	.....	.....	.....	
7. Cereal (cooked).....	5 oz.	.....	.....	.....	120	.....	
Cream.....	2 oz.	.....	.....	.....	240	.....	
Lactose.....	1 oz.	.....	.....	.....	120	65	
Cane sugar.....	¼ oz.	.....	.....	.....	30	.....	
8. Bread or toast.....	50 gm.	25	.....	5	120	.....	Slice 4 by ½ inches thick, 50 gm.
9. Milk toast.....	.....	.....	.....	.....	.....	.....	Add steaming milk as desired.
Bread.....	50 gm.	25	.....	5	120	.....	
Cream.....	2 oz.	1.8	2.4	1.5	240	.....	
Lactose.....	1 oz.	30	.....	.....	120	.....	
Butter.....	10 gm.	.....	8	.....	65	.....	1-inch cube.
10. Baked apple.....	1	18	.....	.....	75	.....	Sugar to taste.
Lactose.....	1 oz.	.....	.....	.....	120	.....	
Cream.....	1 oz.	.9	1.2	.7	120	.....	
11. Jelly.....	.....	.....	.....	.....	.....	.....	Flavored with beef, wine, or fruit.
Gelatin, q. s.....	.....	.....	.....	.....	.....	.....	
Lactose.....	1 oz.	30	.....	.....	120	.....	
Cane sugar.....	1 dr.	8	.....	.....	15	50	
Water, q. s. ad.....	5 oz.	.....	.....	.....	.....	.....	
Cream (whipped).....	1 oz.	.9	1.2	.7	120	.....	
12. Potato (medium).....	3 oz.	32	.....	3.5	90	.....	
Butter.....	10 gm.	.....	8	.....	65	.....	1-inch cube.
13. Crackers.....	3-10	70%	.....	.....	12-40	120	Each kind must be weighed in fractions of ounce.



Employees' Service Department

BY RUPERT BLUE, D. Sc., M. D., D. P. H., Surgeon General United States Public Health Service, Washington.

There can be little doubt that there is need for efforts to improve the working and living conditions especially among the unskilled and low-paid group of wage-earners. But, owing to the objections on the part of many employers as well as employees to the term "industrial welfare work," there appears to be an increasing demand that these departments be reorganized and placed on a basis that will make them of greater service, and not viewed with suspicion by employees as measures devised by employers to stabilize their labor supply.

Since there has arisen considerable prejudice against the term "welfare work," it is suggested that the term "employees' service department" be substituted in its stead, and that these departments be reorganized on a basis of joint ownership and control by those responsible for working and living conditions—i. e., employers and employees.

In order to accomplish this under our present organization of industry, it is suggested that the following general principles be embodied in the organization of these departments:

1. **MEMBERSHIP.**—All employees should be entitled to the benefits of the employees' service department. If there is a very decided health hazard for some of the employees, they should be classified according to the departments in such a way as to segregate (for purposes of contributions) the extremely hazardous occupations, or otherwise they should be classified according to wages.

2. **CONTRIBUTIONS.**—a. The employees' contributions should be a fixed amount or a certain percentage of the wages, depending on the benefits to be provided. The contributions should vary according to the amount of expenditures from year to year.

b. Employers should contribute a sum equal to that of the employees, or, at the lowest, one-half as much. In the case of low-paid workers or especially hazardous occupations, the employers' share should be increased in a reasonable proportion. To induce the employees to become members of the department, employers might vary their contributions from one-half of the total amount of the contributions of their employees when less than 50 percent of them are members up to an equal amount when 90 percent or more are members.

c. Contributions of employees should be deducted from the pay roll by employers, and, together with the employers' contribution, should be paid to the treasurer of the department monthly.

3. **BENEFITS.**—The benefits should be such as may be decided on by the members, whether hospitals, visiting nurses, loan associations, clubs, or benefit funds for sickness, invalidity, old age, and the like. It should be un-

derstood, however, that insofar as practicable, the benefits should be in proportion to the contributions.

4. **ADMINISTRATION.**—a. The control should be divided between employers and employees according to proportion of contribution.

b. **Officers.** (1) Board of directors: employer directors to be appointed by employer and employee directors to be elected by employees, the number representing each to be proportionate to contributions. (2) All other officers to be elected by the board of directors; these should include the president, secretary, treasurer, etc., and the medical officer. (3) The executive officer may be either the president, secretary, medical officer, treasurer; he should be in charge, subject to restrictions imposed by the constitution, by-laws, and the supervision of the board of directors.

Whatever the object for which organized, every effort should be made to make the benefits reach every employee, as otherwise, as shown by experience, the low-paid workers are least liable to join and they are the very ones who stand in greatest need of the benefits.

In order to accomplish this, membership would have to be compulsory. It is realized that this principle is objected to by many, so, if some other method can be devised by which the benefits are made universal, such a method is advisable. Compulsion, when exercised under a democratic administration such as that contemplated in the above outline, will, no doubt, relieve the compulsory feature of many of the objections.

This plan of organization ownership and control of an "employees' service department" is not presented as an ideal, but as an improvement over present methods, and as one calculated to remove some of the present objectionable features.

Since most of the work in this field usually has for its object the improvement of the health of the workers, and since the industrial workers and their families form a very considerable proportion of the community population, it would seem but just that health departments should have a field of usefulness in these departments, and should get in touch with them and endeavor to work out some plan whereby their work would be coordinated with the "new public health" movement.

It may be possible to do this through the whole-time medical officer of the department. Such a link with the health departments would give to health authorities the personal touch with the home and the shop which is at present lacking.

Working together in this way, the "employees' service department" would become an instrument of extraordinary value in improving the health of the wage-earning population.

Employees at Macy's, New York, Conduct Welfare Work

BY HARRY B. TAPLIN.

There is no so-called welfare department at Macy's. That does not mean, however, that the store is not vitally interested in the welfare of all the employees. It simply means that whatever is done is undertaken, so far as possible, by the employees themselves, working together for their own welfare. Macy's believes in encouraging self-improvement, social intercourse, and cooperation for mutual advantage along democratic, self-governing lines. With this in view, the store provides opportunities for people to learn to help themselves.

The various employees' organizations at Macy's illustrate this policy. The Macy Mutual Aid Association, to which all the employees of the store belong, undertake to

care for the health and physical well-being of all the employees. The work of the association is conducted entirely under the supervision and management of the board of directors, elected annually by the employees of the store. The association employs through its regular elected officers, who are responsible for its management, a physician, two trained nurses, and a dentist. All employees receive a thorough physical examination, and are free to consult the doctor about their ailments or to go to the nurse in the hospital for treatment. When ill, the visiting nurse calls on them to see that they receive proper medical attention.

From the funds supplied by the weekly dues, members are entitled to receive sick benefits for a period of ten weeks. There is also a death benefit. Employees who desire to do so may have their teeth attended to at cost, the work being done on store time. Those who are unable to pay promptly for the dental work at the time it is done are allowed to make small weekly payments.

Under the auspices of the Macy Mutual Aid Association a free library is conducted, from which employees can obtain both books and magazines. Some of the books are loaned by the New York Public Library.

A distinct effort is made at Macy's to emphasize the importance of health. The store has maintained for many years a lunch room for the employees, so that they may obtain food of the best quality at cost. The store physician has given regular talks to the employees on diet and other helpful matters. In order to provide an opportunity for a healthful vacation, the employees have organized, with the assistance of the store, a summer camp for the girls, and, by stimulating an interest in saving for a vacation, have encouraged as many as possible to attend. To this end a branch of the Vacation Association has been maintained at the store for several years, and over 1,000 deposit savings regularly, many of them setting aside something each week for their vacation period.

The girls' camp development was an outgrowth of the efforts made by the Community Club, an organization of both male and female employees devoted to self-improvement and social intercourse. When the members of the Community Club expressed a desire to have a summer place where the girls of the store could spend their vacations together, they agreed to be responsible for the successful management of such an undertaking. Through the support of the firm the camp was opened for the summer of 1915, and proved so successful that a larger place has been obtained on the south shore of Long Island for the coming summer. This camp will be under the general management of a camp committee, comprised of female employees representing the different floors of the store. The girls who go to camp pay their own board and help with the work of the camp; the store provides the camp, including the equipment, and meets the general expense of operation. The Community Club, by cooperating with an outside organization, also provided an opportunity in 1915 for the young men of the store to go to a well-conducted camp near West Point, N. Y.

The young men had already shown their interest in developing themselves along physical lines by having organized and conducted an athletic club, which met one evening each week at the Twenty-third street branch of the Young Men's Christian Association. So greatly has this athletic work interested the men employed at the store that plans have been laid for the use of recreation grounds, located in Brooklyn, during the coming summer. The employees at Macy's intend to organize an independent athletic club, and conduct baseball games and athletic sports on these grounds during their free time. The de-

velopment has been fostered jointly by members of the Community Athletic Club and members of the Macy Men's Club.

The Macy Men's Club is a self-governing organization, to which any man employed in the store may belong on payment of the regular dues, 25 cents per month. It came into existence in response to a demand for some place to which the men could go during their free time. For years the store had maintained a rest room for the female employees, but had provided no place for the men. The club is located in quarters near the store, and is well patronized, especially during the lunch period, when the men enjoy a quiet smoke. The management of the club is vested in a board of directors, who are elected by ballot, and who are held responsible by the members of the club for the promotion of the best interests of their organization. The club has two floors, one of which is used as a lunch room and the other for reading, smoking, and games. Food of the best quality is served at cost, and may be obtained at any time from 8 a. m. until 8 p. m.

The men at Macy's take a very great interest in their club, and, through the committees which they have appointed, supervise all details from the serving of the food to the upkeep of the quarters.

The men's club has been instrumental in bringing the men together in a most democratic manner. The membership of 500 includes all types and kinds, regardless of race or position. At the club one man is as good as another—there is no distinction of any kind. They eat at the same tables, are served the same food, wait on themselves in the same way, and sit down together in the smoking room after their meal for a friendly game or a quiet chat. The common funds of the club are used for such purposes as buying a new piano for the members who can play, or providing magazines and games. Every six months the balance in the treasury is turned over by vote of the board to R. H. Macy & Co. in partial payment of the general expenses of maintaining the men's club. An effort has been made by the members to make the club as near self-supporting as possible, as this is the goal toward which they are working.

The employees at Macy's believe in promoting the "get-together" spirit. They enjoy arranging outings, dramatic entertainments, and other social occasions. The men's club held a "Ladies' Night" in their club rooms, to which they invited all the women employed at the store. A musical entertainment was provided, with refreshments and dancing. This club also conducted a large outing last summer, which was well attended by the employees, including executives, and those present greatly enjoyed the baseball game and outdoor athletic sports. When over 600 sat down to dinner at the long tables, it seemed like one large family. The Community Club, which conducts classes in dancing, gymnastics, swimming, singing, sewing, and millinery, has also played an important part in definitely fostering the spirit of sociability by providing ways and means of bringing the employees together. Through its well-organized dramatic club the members of the Community Club have arranged interesting dramatic entertainments, which have attracted large audiences of 1,000 or more employees. After the "show" the employees remain to dance and enjoy a social time.

Macy's policy is to help employees to help themselves. The younger girls have an exceptional opportunity to help themselves by attending the Macy Continuation School, conducted by the department of education in conjunction with the store. The purpose of this school is to supplement the education of those girls who realize, since

going into business, that they are deficient in certain grammar school branches, such as ordinary arithmetic, spelling, penmanship, as well as in the use of English. Any girl who wishes to attend this school ten hours each week may do so without any loss of salary or other inconvenience. This is entirely voluntary, as all the employees at Macy's are over 16 years of age and are therefore not obliged to attend school. The store has met the employees half way in this as in other matters. If the girls wish to improve their education, every effort will be made to provide a means to that end. The school has been filled ever since it was started, and the girls who have completed

taught in school. Each girl wears as a badge of honor a small pin on which are the Macy Red Star and M. C. S. (Macy Continuation School). The girls are expected to maintain a high standard of work, and thereby demonstrate to others the value of their special training.

The Fellowship Club of the Commonwealth Steel Company, St. Louis

The Commonwealth Steel Company operates an open-hearth cast steel foundry. Its products consist of cast steel devices for railroad equipment, trucks, antitelescop-

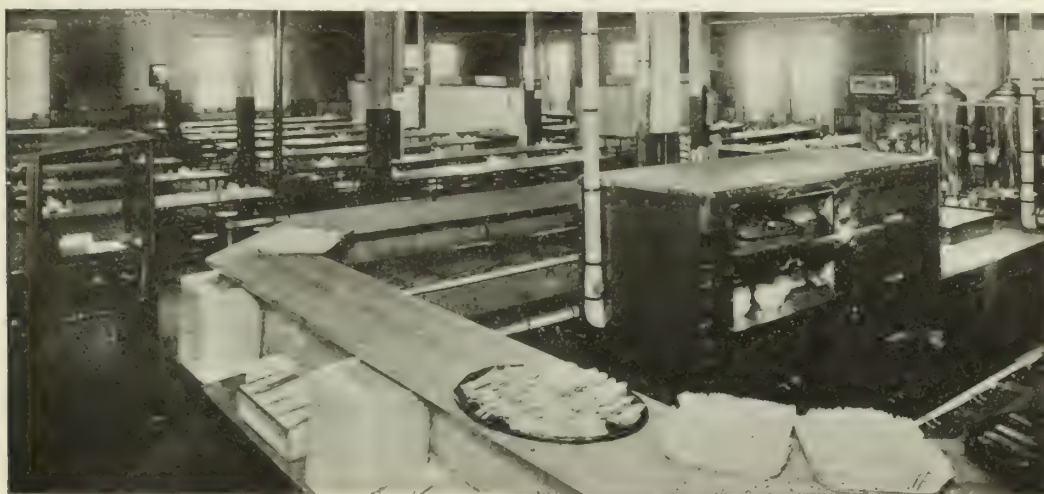


Fig. 1. Commonwealth Steel Company, St. Louis. Cafeteria restaurant.

the work have been greatly benefited by this training; in fact, it has been possible to promote a large majority of these girls to better positions as a result of the development which came from attending the Macy Continuation School.

The girls who have gone through the Macey Continuation School have banded themselves together into an or-

ing platforms, underframing, and important devices for locomotives. It will be readily seen that these products involve great responsibility on the part of the manufacturers, not only in the care of their own employees, but in order that the public may be protected against accident in their use. The watchword, "Fellowship," has been taken by the company as a magic charm, and its efforts toward



Fig. 2. Commonwealth Steel Company, St. Louis. Employees' store and room for those who bring lunches.

ganization known as the Associate Alumnæ of the Macy Continuation School. By this method they intend to keep alive the tradition and influence of the school as these affect their work and their lives. With their own officers they conduct a regular program at the monthly meetings, and learn to put into practice some of the fundamental principles of conduct and procedure which they were

efficiency emanate from an expression of this watchword in the factory and in the Fellowship Club, the big organization to which its employees belong. The company begins the training of its employees when they are young, and conducts for this purpose an interesting school system in which are taught the commercial branches and the various branches of the mechanic arts. There is a settlement

house around which the resident employees rally for their entertainment, recreation, and social intercourse. "The Home Fellowship Department" is conducted by Miss Edna Haas, whose chief duty it is to maintain intimate touch

consider himself a guardian of the safety of his fellow-workmen. Employees are invited to make suggestions for improvement in the work, or in matters of comfort and happiness of the people. If the suggestion of an em-

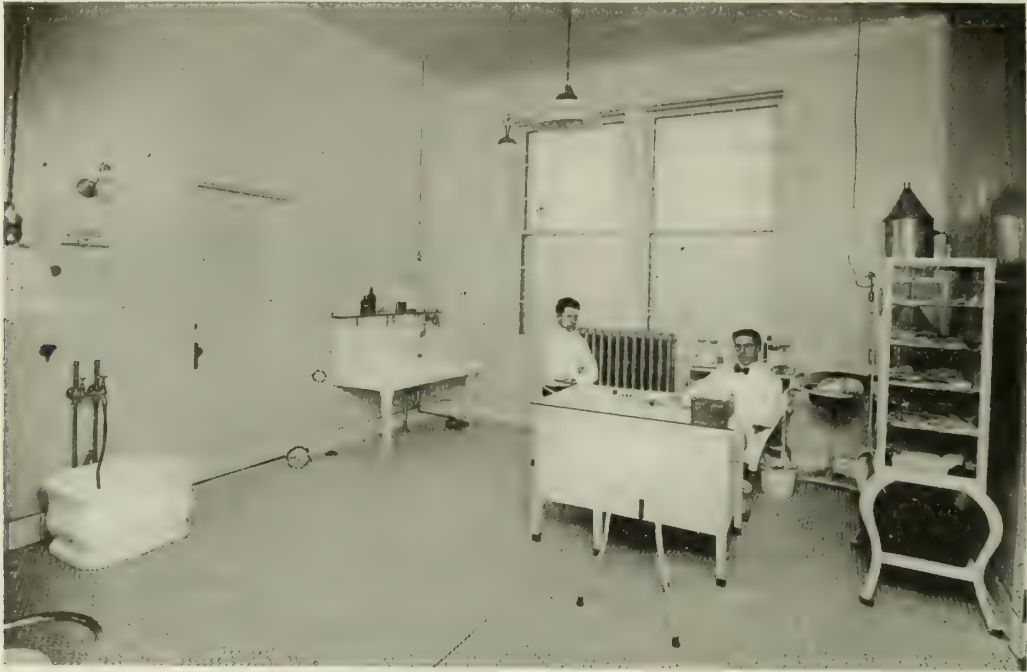


Fig. 3. Commonwealth Steel Company, St. Louis. Dispensary.

with the 35 percent of the employees who are foreign-born. Miss Haas lives among the foreign employees and in the home of one of them, and has wound herself into the hearts of the people and the life of the community until she is the center of their social and domestic lives.

ployee is adopted, he is presented with a handsome bronze fob, and at intervals public acknowledgment is made for assistance from employees in the creation of new devices, or the institution of new methods, or the putting into practice of new safety devices.



Fig. 4. Commonwealth Steel Company, St. Louis. Physical examination room, with dressing booth to expedite examinations.

There are prize systems in the factory for efficient work, and this prize system has developed to a point that each person in the employ of the company has come to

The board of governors of the Fellowship Club, made up of employees of the company, is constituted also a board for the administration of the commissary depart-

ment. In the restaurant 1,200 meals are served each day, and, because of its uniqueness, a sample menu is presented, with the prices of the articles of food:

Old-fashioned bean soup (four crackers).....	\$0.04
Roast pork, dressing, mashed potatoes, and gravy.....	.12
Veal stew with dumplings and potatoes.....	.12
Pork and beans	.05
Wheat muffins	.03
Scalloped potatoes	.03
String beans	.03
Succotash	.03
Pickled beets	.03
Cold slaw	.05
Ice cream	.05
Fruits	.05
Pies, all kinds.....	.04
Puddings	.04
Bread, four slices.....	.01
Pure butter, one piece.....	.01
Coffee, 10-ounce mug.....	.03
Tea, 10-ounce mug.....	.03
Milk, one-third quart.....	.03

Because of its rather isolated location in a small community, and because the purchase of wholesome, perishable articles at private stores near the factory is unsatisfactory, the corporation, on petition from the employees, opened a community store, at which employees are permitted to purchase for cash, or for redeemable coupons, such articles as fresh meats, groceries, vegetables, and the simpler articles of clothing, such as overalls, blankets, and those things that can be purchased by the company in large quantities at a greatly reduced price. The company has its own hospital and dispensary, where physicians are constantly on hand for cases of illness or needed surgical work.

How One Corporation Extends Its Welfare Work to the Lower Animals in Its Employ

"Inhuman abuse of live stock, or negligence resulting in its death."

This is a prominent paragraph in the list of offenses posted at the mines and coke ovens of the Colorado Fuel and Iron Company, for the commission of which a workman is liable to discharge without notice. The posting of this list is in accordance with the terms of the Industrial Representation Plan. For other offenses, not on the list employees cannot be discharged without first having been notified in writing that a repetition of the offense may be cause for dismissal.

The list of offenses punishable by discharge without notice consist mainly of violations of law and of misconduct which endangers the lives of fellow-workmen. The rule regarding abuse of live stock, however, is enforced just as strictly as any other, and employees are expected to take every measure dictated by humanity and good sense in their treatment of mine mules.

KICKS AND BLOWS, OLD SYSTEM

Humanity in the mule stable has not always been a part of the coal mining system. In former days the mine mule in many localities was given less care than a piece of machinery, and often was at the mercy of a brutal and ignorant driver who had no thought but to get the largest possible amount of work out of the animal by dint of blows, and frequently the work that the mule was expected to do was out of all proportion to his maximum ability. Instances of mules being beaten to death are all too common in the earlier history of coal mining.

The wretched mule was frequently forced to toil from early morning until evening without a particle of grain and without a drop of water to wash the coal dust from his parched throat.

HUMANITY AND SCIENCE COMBINE

In the mines of the Colorado Fuel and Iron Company the humane treatment of mules has been a subject of care-

ful attention for years. Scientific thought has been directed toward the best methods of caring for live stock until a system has been built up which combines the dictates of humanity with the sound business principle of conserving the supply of animals.

The regulation which provides discharge for abuse of a mule is only one of the means taken to secure this end. The company employs an expert veterinarian, and a mule hospital is maintained at a central point in Las Animas county, where injured or seriously sick animals are taken for medical or surgical treatment. At all operating mines it is the intention to carry at least a 10 percent surplus of mules to handle emergency work and to relieve injured or tired animals. Mules working underground, except in emergencies, are in harness only eight hours, and sometimes a much shorter period where the work is unusually heavy.

At all mines in the Trinidad and Walsenburg districts the stables are above ground. In other districts there are a few underground stables, which are kept in just as sanitary and comfortable a condition as those on the surface. All the stables have large stalls floored with packed earth and coke braize or planking. Ample provision is made for light, and air drafts are prevented in order that mules may not take cold after coming from their work. Drainage is supplied by arched alleys running between double rows of stalls.

PLENTY OF WATER FURNISHED

Water is furnished all mules in abundance in the mines, as well as at the stables. Sometimes this water has to be piped from long distances at considerable expense, but no mule ever lacks for a drink of water in the stable or at work. The stables are cleaned daily, and sometimes twice a day. In the underground stables the manure is hoisted from the mine each day, and drainage is provided by pipe or sewage line to the sump, where it is pumped to the surface.

The company owns about 1,000 mules, the average value of which is \$157 each. These mules are used principally in the coal mines, although a considerable number are in the iron mines and limestone quarries, and some in the Minnequa steel works.

Welfare Work of L. S. Donaldson Company, Minneapolis

BY ETHELYN LESLIE HUSTON.

The mental attitude of the average business man in regard to the care of employees is, I have found, rather peculiar. A few employers are direct and practical. They think, as in the "Choir Invisible," that the camel crossing the desert with a burden on his hump may have its reason in a divine plan, but, if it has a sore under the burden, why the sore? The practical man, consequently, gives healing ointment for the sore, promptly and simply, and leaves analysis and deduction to his skeptical brethren with his blessing. Meantime the galled shoulders under the burden sap two-thirds of the camel's energy, and the skeptical brethren hold up their hands and cry aloud that the camel refuses to smile and look pleasant.

What is Donaldson's care of it's people? First and most important, the silence room; twelve sanitary couches, laundered blue and white covers, wash blankets—coolness, darkness, perfect quiet. Next, the hospital room, with medical and surgical remedies, hot water bags, crushed ice bags, etc.

Then comes in one point where the architecture does count—that is the location of the welfare office, which is for the welfare director or trained nurse, whichever she is

called. This office in Donaldson's the girls and women pass on the way to the silence room. Its door stands open, and this means that many pains and aches and incipient troubles pause at the door between 11 a. m. and 3 p. m. that would not go to a distant and formal "hospital room." It must be remembered that the majority of employees are naturally diffident

and shy instinctively at red tape and officialdom. They are as suspicious and easily alarmed as the birds of the forest. A glittering hospital and starched trained nurse is to them a combination to be faced only on a stretcher.

For very stormy weather we have skirts, slippers, and stockings to lend while the girls' clothing is being dried. The slippers are also borrowed to wear while shoes are being mended. Umbrellas are rented for 5 cents each.

The Sick Benefit Association helps the sick financially, and the firm cooperates with the association in having a house physician and in caring for those requiring a change of climate or protracted rest. The financial crises that arise at times are considered by the welfare department and assistance given, thus protecting employees from professional money lenders.

Donaldson Hall is a very delightful home in the best residential part of the city, where the girls obtain board for \$3 and \$3.50 per week. Donaldson Camp, on Independence Lake, is popular in the



Fig. 1. L. S. Donaldson Company, Minneapolis. Silence room for women employees.

summer for vacations and week-ends.

The social side of life includes dancing, basketball, choral societies, a baseball team, and military organization. The latter, with a band composed of employees, promises to keep things interesting during the summer.

The recreation room has a public library branch, and is furnished with piano, easy

chairs, writing materials, and magazines. Adjoining this room is the employees' lunch room, where wholesome lunches are served at very low prices.

How the Wheatena Company, Rahway, N. J., Furnished a Hospital for Its Community

It is an old and obvious fact that the exercise of a muscle gives it growth and strength; so, too, the exercise of a conscience sets it up more acutely and gives it a hair-

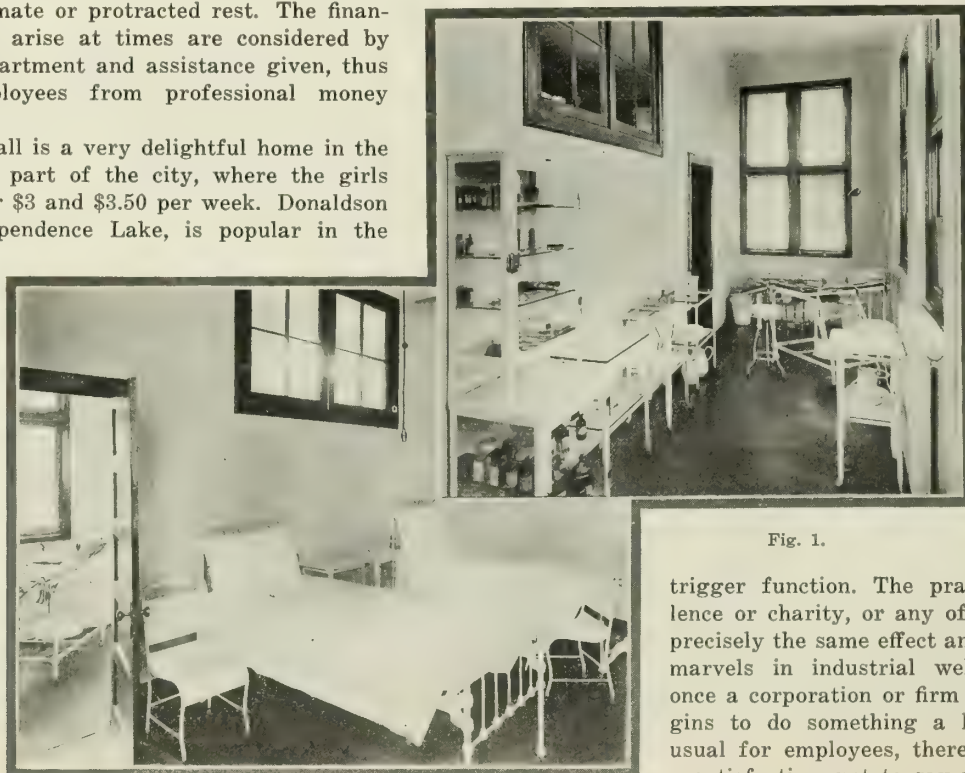


Fig. 1.

Fig. 2.

The Wheatena Company, Rahway, N. J. Fig. 1—A view of the operating room in the plant's hospital. Fig. 2—A view of the emergency ward in the plant's hospital.

trigger function. The practice of benevolence or charity, or any of the virtues, has precisely the same effect and it is one of the marvels in industrial welfare work that once a corporation or firm or individual begins to do something a little out of the usual for employees, there comes so great a satisfaction, not to say pleasure, that an

impulse drives the doer of good to go a little farther and to do a little more.

This revery is apropos, just at this moment, of a case in point. Not long since the Wheatena Company, of Rahway, N. J., was engaged in the construction of some additional factory buildings. While the work was under way it happened one day that a locomotive of the Pennsylvania Railroad Company, engaged in switching about the company's plant, exploded and severely injured the engineer and fireman. There was no hospital in Rahway, and the men were hurried into the plant and given such first aid as the facilities permitted. No doctor could be found at the moment, and an hour and a half had elapsed before the men received attention. They were then taken to a hospital in Elizabeth, eight miles away, where they both died after very great suffering.

Immediately the company, that had been looking fairly well after the minor ills of its own employees, stopped work on its new building and had the plans changed to include an emergency hospital suite, including an operating room, a hospital room, and the necessary auxiliaries. As soon as these were completed, they were thrown open to the physicians and the public of Rahway, and now Rahway has an excellent, if small, hospital, capable of meeting any emergency.

Industrial Welfare Problems

To the Editor of THE MODERN HOSPITAL:

I want, first, to congratulate you on the August number of THE MODERN HOSPITAL. It was in every way worthy of your splendid publication, from which we have had many benefits in our own hospital and health service for our employees.

We note in your August number that many industrial corporations serve a cafeteria lunch, most of them a very good lunch—one that might be served by any commercial lunch room. But we notice that some corporations make a very strong point on the chemistry of the foods served at these lunches.

Does THE MODERN HOSPITAL believe it is commercially practical to pay the same attention to the chemistry of these foods as it would be in the special dietary for the sick? Isn't that carrying the commercial lunch a little too far?

A NEW ENGLAND CORPORATION.

It would be carrying the commercial lunch idea a little too far if the proposal carried with it the same complexities that are involved in the hospital dietary; but you are not feeding sick people, and you need not think about diseased conditions. It seems to us that your only problem is to calculate the kind of work at which your people are engaged, and provide food, not only that they can digest, but the kind that will give the greatest amount of nutrition and at the same time be most appetizing. If you have men to feed who are doing hard physical work, you will have no trouble about their appetites, and meat and potatoes and bread will meet their greatest needs, because their digestions will take care of almost anything, and such articles as these, varied a little from day to day, to keep the menu from becoming monotonous, will conserve their strength.

But if you have many clerks whose work is confining, but not physically arduous, you will find that their appetites must be coaxed and that they cannot relish the stronger foods.

Your hardest problem undoubtedly is to feed your women workers, of whom we judge there must be a good many, because of the nature of your business. You will notice that in the public restaurants women eat salads and pastries and rarely meats or potatoes or bread. But salads and pastries, coffee, tea, and the various knick-

knacks furnish very little nutriment; therefore it seems to us that if the lunch to which women are seated can be made "tasty" and at the same time nutritious, it will meet their requirements, even if it does not meet their fancies. In some industrial lunch rooms women are coaxed to eat the nutritious and easily digested things by attaching a low price to them, and by putting an almost prohibitive price on the nerve-exciting, nonnutritious foods; milk and cocoa, of the fluids, and rice or bread puddings, custards and fruits among the desserts, are among the former, and coffee and tea of the fluids, and salads, are among the undesirable things.

It seems to us that these menu problems can be best settled for employees without going into any arguments with them, because most people object to having their daily lives "regulated" for them.

Welfare Work and Strikes

To the Editor of THE MODERN HOSPITAL:

Why is it, if much welfare work conduces to loyalty and the happiness of industrial workers, that those corporations that do the most for their people seem to be the greatest sufferers from strikes? We are rather coming to the opinion that too much welfare work is quite as bad a thing as too little. But we have not been able to hit upon the proper dividing line; perhaps you can help us.

ONE OF THE SMALLER ONES.

If welfare work among industrial corporations had been standardized and all its problems settled, THE MODERN HOSPITAL would have found no inspiration or even need to initiate a propaganda in its behalf.

Welfare work in the industries is in its infancy; nothing about it has been standardized. There is something about it, however, that awakens responses in the public mind, and it is not to be wondered at that some of the corporations, with the American spirit of advertising, have rather exploited their welfare work as a publicity enterprise. This accounts for the fact that much of the correspondence of THE MODERN HOSPITAL with the corporations in regard to their welfare work has been conducted through their publicity agents.

This attitude of the corporations would be likely to permeate the work itself, and in some cases it has been made plain to THE MODERN HOSPITAL that employees have felt that they, too, were being exploited, and that whatever work was being done was not in their interest, but was just one more "advertising dodge."

Then, too, some corporations have not been quite wise in the methods employed, and have allowed a feeling to creep in among the employees that they were being made the recipients of charity—a feeling that would naturally be resented. But all this will clarify in time; corporations will realize that their welfare work is merely an additional factory output, that the money expended is an investment sure to net one of the largest profits in the form of greater efficiency. As this realization comes, the welfare work will assume an entirely different aspect, and the change will react on the employees themselves, who, in turn, will accept it as part of the business, and that the underlying spirit of it all is cooperation, mutual interest, and team-work. Then there will be no fly in the ointment of harmony, and the welfare work will really be a deterrent of strikes rather than an irritant cause.

Dr. Alfred F. Beck, who has been chief resident physician at the Samaritan Hospital, Philadelphia, for the last three years, has resigned to engage in private practice.

NEW INSTRUMENTS AND EQUIPMENT

VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor.

Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

Revolving Operating Room

BY CARL L. HOAG, M. D.,

Assistant in Surgery, University of California Medical School, San Francisco.

In those clinics and teaching institutions in which there are always a number of spectators at operations the problem is how to arrange the equipment so that all can see and hear. The tendency now seems to be toward constructing small amphitheatres, so that the observer can get close to the operator. In such amphitheatres the patient and the entire equipment of the operating room have to be moved out after each operation, and the room must be set up again. This takes up much valuable time, causes confusion, and often renders the asepsis questionable. Other difficulties arise—there are a number of reasons why the patient should not be anesthetized in the room in

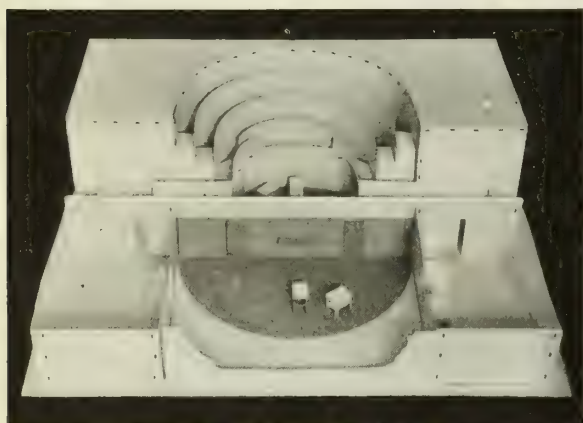


Fig. 1. Model, with stage in position. The partition extends to the ceiling and completely divides the two rooms.

the presence of the audience. To avoid this, either the anesthetic must be started in another room or the audience must leave the amphitheater for a short time. When using nitrous oxid we have to move not only the patient, but the machine and large, heavy tanks. If the audience has to move, there is added confusion, discomfort, and raising of dust. The use of two operating rooms alternately has been a great help, but it does not avoid the need for moving the audience.

While visiting a large number of surgical clinics recently I was struck by the confusion occasioned in all of them by the arrangements for changing from one operation to another. It occurred to me then that a revolving operating room, similar to the revolving stages used in some of our theaters, might entirely solve the problem.

With this plan in mind, I constructed the model shown in the accompanying illustrations.

There was one difficulty to be overcome in this plan. The ordinary operating room is built in the form of a half-ellipse, so that the seats on either side are as close to the table as possible. It is obvious that if the floor is to revolve, the space occupied must be circular. If it is desired to retain the elliptical shape with its advantages, two methods of construction may be followed. One would be to revolve a smaller, central part of the floor space. This would necessitate moving all the tables near the audience after the floor has been rotated into place. The

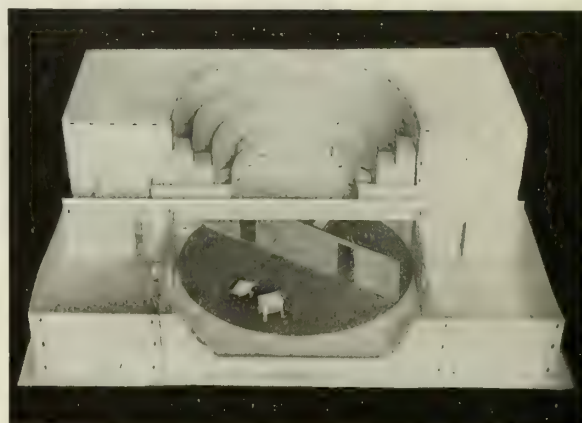


Fig. 2. Model, with stage revolving.

other would be to elevate the side seats, allowing them to project like the boxes in a theater. This latter plan offers the greatest number of advantages in that the space underneath can be used in the operating room, and at the same time the side seats are sufficiently elevated to bring the operative field into view over the shoulders of the staff.

As represented in the model, the boxes are about 6½ feet above the floor, thus allowing one to walk under the projection. It likewise allows a 6½-foot partition between the two halves of the revolving floor to swing into place. There are swinging doors in the partition, through which the surgeon may pass when the stage is turned. The stage rotates around a hollow center, through which water and nitrous-oxid-oxygen connections enter each room. The scrubbing sinks, if placed in the center, as shown here, revolve with the stage. The waste water runs into a circular hopper underneath the floor. These sinks may perhaps be located to better advantage under the gallery, where they are readily reached through a side door from under each box. The stage sinks have been provided, however, for the convenience of those surgeons who wish to address the audience while scrubbing up. To prevent accident, safety gates are provided to automatically close the halls and doorways at the time when the stage begins to revolve.

The stage turns on two or more circular tracks by power either from an electric motor or from a hand windlass. The two operating rooms are built opposite each other—one with a gallery, the other without. One side of the stage can be set up while the other is in use, and the first operation, either complete or incomplete, can be swung into the back room while the new one proceeds.

A rotating operating room offers the following advantages: 1, the saving of time and prevention of noise and confusion between operations; 2, anesthetization on the table without moving either patient, equipment, or audi-

ence; 3, the possible use of a stationary table, such as the Balfour; 4, it permits each operation to begin on schedule time by swinging the prolonged operation into the opposite room for completion, which is particularly important when observing students' hours; 5, it permits of the independent or combined use of two operating rooms as desired, without increase of space or duplication of equipment; 6, it promotes better asepsis.

Uniform for the Wet Nurse

BY JULIUS H. HESS, M. D., Chicago.

To overcome the slovenly appearance of the wet nurse as she is usually seen wandering about the wards of an

nurses in general training and the infants' nurses, a light-brown striped gingham is used in making the uniform.

UNIFORM.—The uniform must be considered as consisting of three parts—the overdress or street dress, the undervest, and the chemise.

The street dress has for its main features two large



Fig. 1. Dressed for street wear.

infants' hospital, the following described uniform has been devised:

MATERIAL.—To distinguish the wet nurse from the



Fig. 2. One lapel of dress raised and thrown over shoulder, one lapel of undervest raised and breast exposed for nursing.



Fig. 3. Both lapels of dress thrown over shoulders, with one breast exposed for nursing.

lapels, which are fastened from the shoulder and so arranged that they can be unfastened beneath the waist belt and again at a point where they meet in the median line, and readily thrown over either shoulder, preparatory to



Fig. 4. Undervest, with one lapel raised, exposing breast.

nursing. After the nursing the lapel can again be brought down over the front of the waist, snapped in the median line and under the belt, and the nurse is again ready to proceed with her usual duty.

The undervest is shown with two circular flaps fastened by three eyelets, which can readily be released and the

flaps thrown upward, or, better, tucked up under the dress, as shown in Fig. 2. Some of the nurses prefer to run an elastic band of narrow rubber along the upper edge of their ordinary vest, making it loose enough so that with a little tension the upper edge of the undervest can be pulled down beneath the breast which is to be nursed or expressed.

The chemise is of the ordinary type, such as is worn by women, with a very slight elastic band sewed along the upper border from shoulder to shoulder, which allows the chemise to be drawn down beneath the breast and is readily replaced after nursing. It has been our experience that most of the wet nurses can make their own uniforms, and take considerable pride in doing so, when a good pattern is furnished them. When this is not possible, they can be made by the ordinary dressmaker.

A Shadow Box for Use in Stereopticon Demonstrations in Amphitheatres and Rooms Which Cannot be Darkened

BY JULIUS H. HESS AND EMERY H. DU FOUR, Chicago.

The fact that our medical clinical amphitheater at Cook County Hospital could not be darkened led to the construction of the illustrated shadow box (Figs. 1, 2),

tion. The frame is made from thin strips of wood (Fig. 4), and the four sides are covered with heavy black cloth (light-proof), such as is used by photographers. The



Fig. 3. Four sides and curtain.

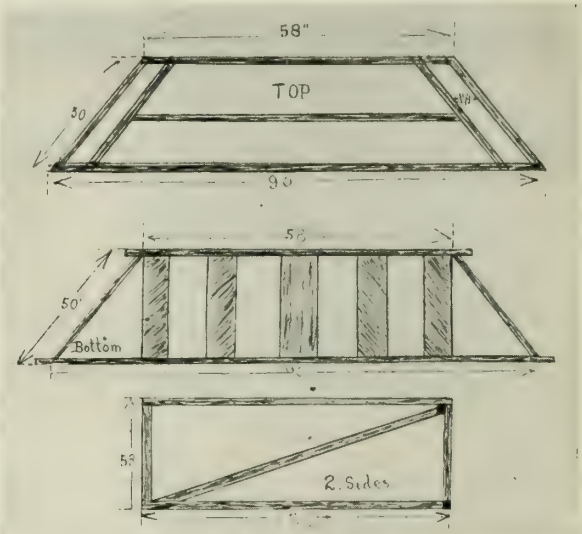


Fig. 4. Diagram of top, bottom, and one side. Frame made of 1-inch square strips; bottom strips 4 inches wide and $\frac{3}{8}$ inch thick; weight of box and cloth covering, 45 pounds.

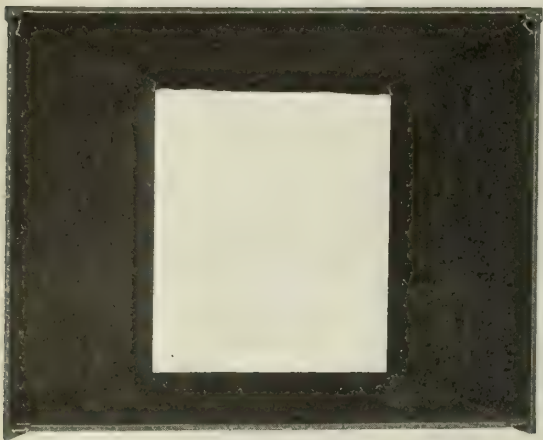


Fig. 1. Shadow box in position, hooked to wall of room.

which consists of four readily detachable sides and an ordinary white roller curtain (Fig. 3), which latter is suspended from hooks fastened at the back of the upper sec-

shadow box complete weighs 45 pounds, and is fastened to the ledge of the black board above and below by four hooks. It can be put up in about three to five minutes and removed even more readily.

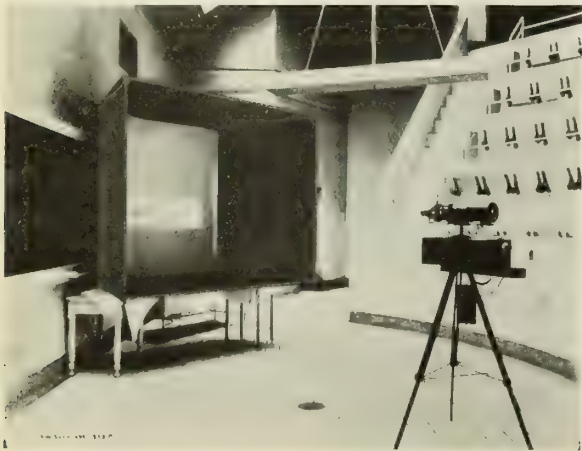


Fig. 2. Shadow box in use.

Fry Laboratory Glassware

Laboratory workers will be interested in knowing that practically a complete line of laboratory glassware is now being made in this country of a quality of glass which it is claimed is even superior to the Jena glass, which for years has been recognized as the best glass for laboratory utensils. Some of this glass was recently submitted to the testing laboratory of the University of Pittsburgh, and from the report which was made we take the following:

"Four-hundred-c. c. beakers were weighed, then filled with equal volumes of 4 percent caustic soda solution and heated at the boiling point for several hours. On washing with water, drying, and weighing, the loss of weight by the Jena beaker was 5 percent greater than by the Fry beaker, showing greater resistance to caustic soda for the Fry glass.

Eight-hundred-c. c. beakers were filled with distilled water, and a sensitive indicator, methyl red, added. The water was then boiled for ten minutes in each case. Each beaker required the same amount—10 drops of fiftieth-normal acid to neutralize the alkali dissolved. Prolonged evaporation, nearly to dryness, developed no more alkali in either beaker. The Fry glass is, therefore, equal to Jena in resistance to attack by water. The alkali dissolved by this treatment was 0.00031 grams.

The Fry beakers are very satisfactory as regards thermal endurance. We have repeatedly filled beakers of the Fry glass with water and placed them over a free flame, without gauze, bringing them to boiling without accident."

Operating Knife with Detachable Blades

Surgical knives with detachable blades are by no means of recent origin, and, as far as the writer can discover, a certain type of these knives was first used at the university clinic in Marburg, Germany, about ten years ago. Since then quite a variety of different models has been offered to the profession, but many of them were too complicated, which defeated the purpose for which they were designed—that is, simplicity, efficiency, and economy. Recently, however, a new knife has been devised and put on the market under the name of the Parker detachable blade scalpel which, in the writer's opinion, is the simplest and safest device of its kind which has so far been offered. There are no levers or screws, and the handle is made of one piece of steel; the part of the handle holding the blade in place is grooved in front and on the sides about two-thirds back (Fig. 2), and a slot is cut into the blade corresponding in front to the width of the grooved part of the handle. To attach the blade, it is held in the left hand; with the right hand the handle is in-



Fig. 1. Parker detachable blade.

serted into the narrowed part of the slot in the blade and pushed forward until it snaps automatically into place, the whole procedure taking but a moment's time. In order to remove the blade, the handle is held with the left hand, the

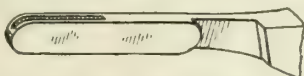


Fig. 2. Showing grooved portion of handle.

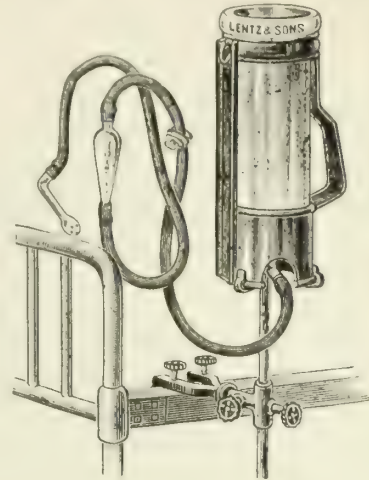
left forefinger presses up the projection on the butt end of the blade, and when this is raised the blade is pulled off the holding arm with the right forefinger and thumb.

The blades are made in four different sizes, both center point and bellied shape, of thin safety razor blade steel. The edges on the blades are hollow ground and carefully honed.

Proctoclysis Apparatus

A simple and efficient apparatus for injecting saline solutions into the rectum, giving the so-called Murphy treatment, has recently been put on the market. The apparatus consists of a metal frame for the purpose of holding a glass container, to the spout of which is attached

the usual rubber tubing, with cutoff, proctoclysis dropper, and angular Murphy saline rectal injecting tube. Attached to the frame holding the glass container is a rod



Lentz proctoclysis apparatus.

which fits into a socket connection on the clamp, and this clamp is so arranged that it can be easily fastened to any of the various types of hospital beds. There is an arrangement on the clamp which permits of changing the angle of the rod holding the apparatus, so that when it is advisable to raise the foot end of the bed, the apparatus will again be in a perpendicular position. As is apparent from the illustration, the reservoir can be raised and lowered and held at whatever height desired by means of a set screw.

Electric Blanket

Here is an electric blanket which will appeal to those whose patients require outdoor sleeping. This blanket is of liberal size, 50 by 75 inches, and any degree of heat up to 112 may be had. The usual method of using the blanket is to pin it to the mattress, and then cover with a sheet. In extremely cold weather the maximum heat is used for



a short time, and by means of a regulator the temperature can then be reduced to the desired point. The manufacturer states that it is impossible for any part to short-circuit, so that there is no likelihood of shock or fire. At the rate of 10 cents per kilowatt per hour, cost of operating current, the average expense for operating the blanket would be about 15 cents per month.

Dr. T. F. Whiteside has opened a hospital at Timpson, Tex.

QUERIES AND ANSWERS

Hospital Admission of Charity Cases

To the Editor of THE MODERN HOSPITAL:

We are somewhat perturbed about the basis of admission of our charity cases to this hospital. Could you put us in touch with the social service department of any hospital that uses a printed questionnaire in admitting patients, from which their eligibility as charity or pay cases is decided?

E. J. EDSALL,

Superintendent St. Margaret's Memorial Hospital, Pittsburg.

We cannot find any example of a social service department which devotes itself especially to the work of determining the amount that cases should pay at admission to a hospital. The information gathered by social service departments, however, in the course of their work with ward patients, is frequently found of assistance to the financial officer of the institution.

Social service departments have been established for the purpose of assisting patients who, by reason of poverty, unemployment, personal or family weakness, or misfortune, need help, and in particular need it in order that medical treatment or convalescence shall be effective. The cases referred to the social service department are, therefore, selected for reasons that do not refer to the patient's financial ability to pay a hospital fee. If the social service department were to see all patients admitted and be charged with the responsibility in determining the amount they could pay, the department, in many instances, would have little time to do the social work for which it is usually established.

In practice the social service department in a number of hospitals sees a considerable proportion of the ward cases, sometimes all of them, at the time of admission or during their stay in the hospital. The facts obtained by the social worker ordinarily include the following ones which bear on the patient's ability to pay, and, as above stated, these facts are, in some individual cases, of use in indicating that the patient could pay something or even more than the usual ward rate.

In addition to the name, address, and other identifying information, there is sought to be determined (1) the occupation of the chief wage earner and the usual weekly wage, (2) the regularity and irregularity of the work, with the view to estimating the amount of wages lost through unemployment or other causes during the course of a year, (3) additional wage earners in the family, (4) their occupation and earnings, (5) total number of persons in family, (6) rent paid.

MICHAEL M. DAVIS, JR.,
Director of the Boston Dispensary.

Laundry Chutes

To the Editor of THE MODERN HOSPITAL:

We are building, and some of us wish to install a laundry chute in the new building. Will you kindly advise whether a laundry chute built inside the hospital is de-

sirable; can it be kept clean and sweet, and is it likely to permit infections to travel from floor to floor?

A WESTERN HOSPITAL.

If you will install the right kind of laundry chute, it will be one of the best investments you can make in your new hospital. Those made of wood or metal or concrete are undesirable; they soon become filthy and "smelly," cannot be cleaned, and altogether are a nuisance that you will regret.

The only laundry chute we know about is one made of heavy cast metal sections, with glazed lining, with a door at each floor built like the porthole of a ship, with sewer connections at the bottom with goose-neck trap, with a crown at the top with hot and cold water connections, and with a ventilator on the roof.

The chute meeting these requirements was devised four or five years ago by several hospital people in conjunction with one of the best hospital architects, and is now being made by the Pfaudler Company, of Rochester, New York.

JOHN A. HORNSBY.

Sterilization of Rubber Gloves

To the Editor of THE MODERN HOSPITAL:

Can you give us a simple and effective way to sterilize rubber gloves so that they will wear afterward?

A SURGICAL NURSE.

Reply by Dr. A. R. Warner, superintendent Lakeside Hospital, Cleveland:

The gloves are washed and rinsed in cold running water; then boiled for two minutes and dried. When thoroughly dried, they are inspected; if necessary, patched to make air-tight. The cuff is then folded back, and the number to be used in an operation is folded in two layers of cotton cloth. Between each pair is placed a gauze sponge, and in the cuff of each pair is another small sponge containing talcum powder. The packages are then sterilized in an autoclave at ten pounds pressure for ten minutes. Care must be used to thoroughly dry them with the vacuum before the autoclave is opened. By using the powder sterilized with each pair of gloves, it is easy to put on the gloves dry. This method has been in use some time, and we have no reason to think that it is not entirely adequate sterilization.

Contagious Diseases in General Hospitals

To the Editor of THE MODERN HOSPITAL:

In your judgment, could a hospital undertake the treatment of contagious diseases in a wing to be added for that purpose, or would it have to be done in an entirely separate building? We may enlarge our present building, and the question has arisen whether we could in any way provide for the treatment of contagious diseases. Some have held that an addition to the building or a separate wing might be constructed so that it could be used in the general work of the hospital at ordinary times and for contagious diseases when the necessity arose.

We would appreciate any information which you would give us as to how a hospital in a small city might be equipped so as to treat these contagious diseases.

A WESTERN HOSPITAL.

The only real demand in an isolation department is that it shall have facilities to cut off intercourse with the rest of the house; a door that can be locked is quite an efficient separation, and the department should have at least four units or rooms in which the chief infections could be isolated. Without knowing anything about your particular conditions, we might say that an ideal arrangement would be four rooms, each containing a small alcove or separate room in which a gas plate, running water, toilet, and bath would be installed. Each of these units should open to the outside, as, for instance, on a porch, so

that an orderly could deliver food, necessary medicine, clean linens, etc., and take away the soiled linens, soiled dishes, and so on, without going into the building. The method of handling these various items is a technic in itself; the dishes, after being used in infected quarters, would be immersed in a 3-percent carbolic solution and delivered to the orderly by setting them on the porch in a bucket or tub; soiled clothing would be delivered in the same way, or placed in a regular laundry bag, the latter not having been in the room, but left on the outside for the purpose by the orderly, who returns to get the full bag.

It rarely happens that you will have more than one or two infections at a time, and the other rooms of this suite, which, by the way, would have additional doors opening on the inside corridor, could be used for any other purpose or for any other class of patients. Such use would depend, however, on another very particular, but easy, technic in the cleaning of the rooms after a case of one of the communicable diseases is released. We are not using fumigants very much at present, and under ordinary hospital conditions they are not efficient, and we do better now by sending the mattress to the sterilizer, or, in the absence of such a device, by soaking it in a 3-percent carbolic solution for twelve hours in a bath tub, and by employing the same methods with blankets and pillows; the blankets should not be sent to the sterilizer, however, as it destroys the fabric. The room itself is cleaned—ceiling, walls, woodwork, and floors—with green soap and warm water, or a 3-percent carbolic solution may be used if desired, although it is not necessary and leaves an odor that is undesirable. The furniture and all woodwork should be cleaned in this same way.

A number of hospital superintendents make very little of the separation of the quarters for the accommodation of the communicable diseases, but they make very much of a technic of the procedures that are necessary to prevent the carrying of infections from one patient to another. These men build their communicable disease hospitals or pavilions just exactly as a general hospital would be built, and they put the segregation and isolation into the doctor and the nurse, using different gowns and gloves for the different diseases, and depend a great deal on soap and water. So that, in a final analysis, it seems you will be perfectly safe in building your communicable disease unit as a part of your proposed new building. If you could have all these rooms on one corridor, with double doors separating that corridor from the rest of the house, in case of necessity, you would be entirely safe to go into the care of the communicable diseases.

Private Convalescent Homes

To the Editor of THE MODERN HOSPITAL:

Knowing that you are well acquainted with various conditions all over the country, I would like to know if, in your judgment, there would be a demand for a private convalescent home. I am a nurse of long experience and have had charge of hospitals, and I am now thinking of opening a private convalescent home. Could I make it pay and are such homes in demand?

A SUPERINTENDENT.

THE MODERN HOSPITAL has been preaching the desirability of convalescent homes whenever the opportunity offered, but it is to be greatly feared that a convalescent home conducted in the way that you propose would not be a paying proposition. It seems that up to the present time convalescent homes should be opened and operated by town hospitals. These convalescent homes could have their own milk and eggs and vegetables on a considerable piece of land in the country; and not only could patients

be kept there for a very much lower rate than in the town institution, but they would have the benefits of these fresh, wholesome foods, pure air, and quiet that ought to go far toward aiding their recovery.

The convalescent home conducted as you are thinking about doing it would be little more or less than a sanatorium, and a sanatorium, if it is conducted right, is a very exacting institution, requiring a lot of money and strong medical support. The equipment of a sanatorium is quite as elaborate as a general hospital, and we doubt very much whether anyone without exceptional connections and a large fund behind him could afford to embark in that business. If you could get a number of physicians having wealthy patients to support you, and if you have ample funds to build, equip, and man such a sanatorium, you could succeed. Otherwise probably not.

Red Cross Equips Two Base Hospitals

The Red Cross announces that gifts amounting to \$50,000 have been received and will be utilized in the purchase for equipment for 500-bed base hospitals to be located in New York city. It is expected to soon secure sufficient funds for the equipment of a third hospital. Three full staffs of surgeons, nurses, etc., have been organized and are under the direction of Dr. George D. Stewart, Dr. George E. Brewer, and Dr. Charles L. Gibson.

Steps are being taken by the American Red Cross in the direction of sending one or two new hospital units of six doctors and eight nurses into both Germany and Austria to meet the conditions under which the British government will permit the shipment of hospital supplies to the central empires, the position having recently been taken that only such shipments of relief supplies as are destined for hospitals maintained by the American Red Cross can be allowed to pass through the blockade. The hospital units sent to the warring countries at the beginning of the war were withdrawn last October, owing to lack of funds.

As a result of investigations made by the Pennsylvania Economy and Efficiency Commission, the Pennsylvania State Hospital will hereafter be required to buy provisions and other staple supplies from dealers making the lowest prices. Statements furnished the commission showed a wide variance in the prices charged for such supplies, it is said. An arrangement has been made with local dealers supplying such things as are needed by the hospitals whereby the dealers will allow a uniform reduction from market prices.

At the Examination

"How would you sweat a patient?"

"I would use the most efficacious sudorifics, such as aromatic stimulants, tea, coffee, etc."

"And if they were not sufficient?"

"I would have recourse to volatile oils, such as ether and the alcoholic compounds."

"And if they produced no effect?"

"I would try antimony, James' powder, Dover's powder, —."

"And if they were useless?"

"I would give sarsaparilla, quinine, jaborandi, pilocarpin, —."

The candidate was sweating great drops.

"And if all of these were of no avail?"

"Then I would advise an examination at your hands."—
The Medical Pickwick.

HINTS FOR HOSPITAL SUPERINTENDENTS

This column is maintained as a help and reminder to hospital workers about the little things in administration. It is urgently requested that everyone contribute his and her "hints." Each item added to our knowledge helps to fill the common storehouse from which all may draw supplies.

What is it costing your institution to keep your cutting instruments in good order, and what kind of care are they getting in resharpening and putting in order? There are your kitchen knives, your dining room steel meat knives, your scissors in the sewing room and in the surgical supply rooms, there are your razors for the preparation of patients for operation, knives and scissors in the operating and dressing rooms. There are hundreds of these instruments even in a small institution, and want of care can increase the cost of them year by year to an almost inconceivable extent.

There ought to be someone in the hospital known to be competent to sharpen the cutting instruments. The quality of these instruments is predicated on the temper in the steel, and it is very easy to take the temper out of a piece of steel. It can be done by putting them on a cold stone and grinding them when the stone is too dry, or it can be done by running the stone at too high a speed or by using too much pressure in the sharpening. It can also be done, and this is perhaps the commonest way of spoiling cutting instruments, by attempting to put too fine a point on them. You had better look after your cutting instruments and see that they are in proper hands.

Once upon a time there was a hospital that had a dressing room next to a surgical ward, but no door between the two, so that patients had to be wheeled out into the hall from the ward and into the dressing room through two doors. There were fifteen patients in the ward, which meant almost fifteen dressings a day. No one seemed ever to think about the inconvenience of this arrangement or the greater number of nurses that were required to take care of the ward when one or two of them were needed in the dressing room, but one fine day a new supervisor was put on that ward and she persuaded the superintendent to spend \$10 to cut a hole through the wall and put a 42-inch door there.

If there were fifteen dressings a day, and each dressing took fifteen minutes, and this condition were permitted to last for fifteen years, it would make a nice calculation to determine how much money was lost in time and service by that inconvenient arrangement, and the value of the suggestion to the hospital when the new supervisor asked for a hole in the wall. This apropos of the little conveniences: a dressing cart that can carry all the paraphernalia with which to do a dressing—not just part of it; a food cart service that can take cold things as well as those that are hot; service boxes and trays that have all of the essentials for the performance of the duty for which they are intended. A hypodermic tray without

sterile water means five or ten minutes of the nurse's time, and often inaccuracy and unsterile hypodermic material. A normal salt solution outfit that lacks one of the essentials to the complete performance of a subcutaneous or abdominal irrigation is quite useless until time and energy have been expended. A drinking water fountain in a large ward where there had been none before has been known to release one nurse from that ward. Large wheels in perfect order on all the beds in the hospital will not only save an immense amount of energy, but time as well, comfort of patients, and back-breaking work on the part of the nurses.

How many hospitals are trying to get away from the tombstone idea in tablets and memorials of one sort and another? It isn't so long ago since the big marble slab above the bed, with its indented gold lettering, was quite *au fait* for hospital tablets. Now it almost makes us shudder to see one of these big marble slabs up over a hospital bed, with some such inscription as, "To the Memory of Our Beloved Son, who died," etc.

For thousands of years bronze has been the aristocratic metal, and it has been used almost as routine practice wherever an expensive and ornamental and everlasting monument was to be created. And how beautiful these bronze plates are, whether they are small, 1 by 3 inches, to extend recognition for the gift of a piece of furniture, or whether they are of large size, 12 by 18 inches, to extend honor for the endowment of a room or ward! Bronze lends itself to very beautiful decorative effects, pretty borders and artistic lettering; bronze is a warm and genial color in its golden red. We associate marble with winter and graveyards and with the dead.

And, while we are on this subject, we might think of another phase of the principle of extending honor for gifts to the hospital. A good many institutions in this country are laboring almost with broken backs, speaking financially, because they have accepted gifts that carried with them permission on the part of their donors to use the bed or ward continuously and without further payment than the original donation. There are plenty of hospitals in this country that years ago accepted thousand-dollar endowments for private rooms, and for years these private rooms have been at the free disposition of the givers of this miserable little thousand dollars. That is why at least some hospitals come out at the end of the year with large deficits—because they have been attempting to reimburse donors far beyond the value of the donation. One thousand dollars amounts to a good deal if there are a good many of these amounts, and if they are nurtured and cared for as an endowment fund, but one single gift of \$1,000 means so little to a hospital as a bed or ward endowment; the interest on \$1,000 is only \$50 a year, which will keep a patient about twenty-five days, and yet there are plenty of hospitals that are keeping patients in perpetuity for an original gift of that amount.

As a matter of fact, a donation to a hospital ought to be a definite philanthropy, or, if you please, charity. The recompense ought to be some cheerful recognition of the gift, such, for instance, as a bronze name plate in the assembly hall, but it ought not to carry with it any privilege other than that.

There is a really valuable advertising end to this principle of institution tablets; the man or woman entering the hospital who sees all about him decorative tablets and dainty forms of recognition of donations is very apt to want to join the galaxy and to have his name on a bronze plate too.

DUMBWAITERS AND ELEVATORS FOR HOSPITALS

Some of the Essentials and Specifications in a Usable Equipment—Much Depends on the Reputation of the Builder

BY J. I. WAIKLEE

The elevator and dumbwaiter equipment in many hospitals is unsatisfactory and far behind the standard of other equipment. If the institution has ample funds for all requirements, if a suitable type of electric current is available, and if the institution has in its employ an expert electrical and mechanical engineer, or is situated within easy access of a reliable elevator manufacturer, so that repairs and adjustments can be promptly and satisfactorily made, then the problem is simple—install an electric elevator and an electric dumbwaiter.

It is where one or more of these essentials are lacking that the trouble occurs. The alternatives are hand-operated dumbwaiters and elevators, and these are frequently supposed to be such simple and crude affairs that no special attention is given to them. The fact is that the average hand-power dumbwaiters and elevators are crude affairs, most of those made today being no improvement over those made years ago. There are, however, exceptions to this rule, and there are both hand-power elevators and dumbwaiters for hospital service which are made by specialists, and which are so designed and built that they do give satisfaction.

The important thing is to secure hand-power elevator and dumbwaiter equipment from a concern which specializes in such outfits for hospital service rather than from some local source which has neither the equipment nor the experience which would enable it to produce a satisfactory outfit, nor, on the other hand, from a large concern which considers hand-power elevators an unimportant side line, of too little importance in comparison with its main line to be worthy of special attention.

As to the dumbwaiter, the first matter to decide is the weight of the usual load. If food for one or a few patients at a time is to be carried on the dumbwaiter, then a light, rapid-running outfit should be selected. The limit for this class of service is twenty-five pounds. If, on the other hand, food for an entire ward is to be carried on the dumbwaiter, loads in excess of twenty-five pounds, then a geared outfit of substantial construction should be installed. Satisfactory results merely depend, therefore, on ascertaining just what the work is to be and the selection of a suitable outfit, or perhaps it may not be amiss to say the selection of that make of dumbwaiter the manufacturers of which may be depended on both to know what should be installed, and to furnish just that and nothing else.

The outfit selected should have an automatic brake to prevent the loaded car "running away" through the carelessness of the operator. The machine should be fitted with steel antifriction roller bearings, and the essential parts of the automatic brake should be of phosphor bronze to insure durability and satisfactory service. The machine must have no pawls, springs, or ratchets to cause noise and get out of order. The car should be built of selected, thoroughly air-seasoned ash, kiln dried before being worked. The sides of the car should be blind-bolted to the sills, and all wood screws the heads of which are exposed should be slightly oval, not buttonhead, to prevent bruising or cutting the hands. This material and construction, with proper design and workmanship, gives a maximum of strength and durability, with a minimum of weight.

The hand or operating rope should be of fine-fibered Russian hemp, containing no coarse fiber or foreign substance to "splinter" and tear the hands of the operator. The lift or carrying rope for car and counterweight should be of pure, selected long-fiber manila hemp for durability, or, in case of geared dumbwaiter, the hemp rope should have in each of its strands a heart or core of wire cable, as this removes the possibility of the rope breaking and dropping the car. The guide runs should be of selected straight-grained North Carolina pine, free from knots, thoroughly seasoned and worked out in a molding machine, as only thus can smooth, quiet motion of the car and weight be secured.

The installation of the outfit is as important as the quality of the outfit selected. A good outfit improperly installed cannot give good results, but the directions and blueprints for erecting furnished by the manufacturers of the best outfits insure satisfaction if the mechanic who erects the outfit is a good workman and will follow these directions.

As to hand-power elevators for hospital service, let it be understood that no hand-operated elevator is suitable for general passenger service; that is, no hand-operated elevator is satisfactory for carrying people enjoying normal health. A hand-power elevator for carrying invalids in the home and sanatoriums and patients in hospitals is eminently practical if of proper design and manufacture. Here, again, the character and reputation of the manufacturer must be largely depended on. Do not make the mistake of supposing that, because a large concern making a first-class article of some other sort has a first-class reputation for his specialty, such concern must necessarily make a first-class hand-power elevator for hospital service. Here, too, often is where architects and hospital authorities make the vital mistake.

Many large manufacturers of electric or hydraulic elevators will frankly admit that they do not make a satisfactory hand-power hospital elevator, and, while they may either tell you that no hand-power elevator is satisfactory for hospital service, or claim that their own is as good as any, check up their statements by consultation with some reputable manufacturer who specializes in hand-power elevators and dumbwaiters exclusively, and draw your own conclusions as to what will best meet your needs and the exigencies of your own situation.

BATTLE CREEK HAS SEMI-CENTENNIAL

Notable Institution to Celebrate Half Century With Carnival, Clinics, and Banquet

In honor of the fiftieth anniversary of its founding, the Battle Creek Sanitarium will have a notable celebration on October 3, 4, and 5. The program is rich in varied features, among which are a great banquet, receptions, athletic contests, industrial pageant, outdoor spectacle, reunion of former patients, and a series of conferences on sociological, eugenic, sanitary, and medical subjects, in which prominent speakers from all parts of the country will take part. A considerable attendance of physicians is expected.

The beginnings of the sanitarium were sufficiently humble. A two-story frame house on a knoll in the outskirts of an obscure village, two physicians, and one patient comprised the tangible portion of what was called the Western Health Reform Institute. But the true riches of the establishment lay in the ideas on which it was based. These included not only the "water cure," but

diet reform, dress reform, and other "simple life" measures for the physical welfare of man. These fifty years have seen as big a change in the methods of the sanitarium as they have in its equipment of lands and buildings, yet those pioneers held the grain of the truth. In one sense the present great enterprise, with its imposing display of architecture, its marvelous apparatus for accurate diagnosis and the healing of the sick, its corps of skilled physicians, trained nurses, and hundreds of other employees, its fame, which has spread to the four corners of the world, is merely the outgrowth of that modest "house by the side of the road."

After a decade of moderate success, the institution came under its present management. New policies, new methods, and new principles were introduced. The old-time "water cure," which was a rule-of-thumb affair, was replaced by rational hydrotherapy. The newest developments of medical science, both as to methods and mechanism, were gradually added in the effort to create an institution that should show in practical operation all the resources of physiologic medicine. At the same time stress was laid on supplying all the comforts of a home and a hotel in addition to facilities for the administration of baths of every description, electricity in its different forms, medical gymnastics, and other rational agencies, with careful regulation of diet.

Steady growth led to successive enlargement of the accommodations. In 1902 a fire destroyed the main building and hospital. In planning the present magnificent structure, advantage was taken not only of the experience gained in the conduct of this institution, but of similar enterprises and hospitals in this country and in Europe. The main structure is 550 feet long, 50 feet wide, and six stories high. There are three extensions in the rear. To make the place entirely fireproof, wood was eliminated everywhere except in the doors and window cases. A ventilating system supplies 150,000 cubic feet of fresh air per minute. The cost of the building and its equipment has been nearly \$2,000,000.

An annex purchased five years ago has rooms for from 250 to 300 persons, and in addition there are several large dormitories and numerous cottages for patients and employees. At present there are about 1,000 guests, including those not receiving regular medical attention, while a force of about 1,700 persons is employed to care for them. This fact gives a striking proof of the elaborateness and complexity of the care bestowed on the sick in a modern sanitarium. Last year a new surgical hospital was opened, embodying the latest and most scientific ideas in construction and equipment.

Being purely a charitable institution, and having no dividends to pay, the sanitarium is able to make liberal expenditures for the indigent sick. In one recent year these amounted to over \$150,000, and the total sum for the half century has been over \$1,400,000. The total number of patients to date is over 104,000, not counting guests not under a physician's care.

A hospital train of ten Pullman cars, designed by the army medical department, has been ordered from the Pullman shops at Chicago. Five of the cars are to be equipped with regular hospital beds, and have large side doors for loading and unloading stretchers; two will be of the regulation sleeper type, equipped with extra fans, medicine cabinets, and ice tanks; one will carry a complete operating room, and another a kitchen large enough to care for over 200 sick. In addition to the regular army personnel, the train will carry a special corps of army nurses to serve in the wards and operating car. The train will be painted maroon, with the insignia of the army medical department.

INSANE HAVE UNIQUE PERIODICAL

New Jersey State Hospital Publishes Journal for Which Patients Are Contributors—Some of the Contributions

The New Jersey State Hospital at Morris Plains, housing and caring for 2,700 patients, has begun the publication of quite a pretentious appearing monthly magazine styled "The Psychogram." The first number contains twenty pages and cover, the page size is 10 by 12¼ inches, and is well printed from large, clear type that makes easy reading.

The chief purpose of the publication, according to an editorial announcement, is "to arouse a spirit of congeniality among those who are residents at the institution; to encourage intellectual and moral improvement in the personalities of all who have occasion to read it; to bring cheer and gladness to patients who are separated from friends and relatives; and for the purpose of giving reliable information to the friends and relatives of patients and such members of the general public as may be interested in the conduct and welfare of this large public charity, maintained at Morris Plains for the treatment and care of persons suffering from the various forms of mental derangement."

Dr. Britton D. Evans, medical director of the hospital, is editor-in-chief, and the members of the medical staff are associate editors. Original contributions are invited from patients, and a large part of the matter published in the initial number consists of such contributions, including "Flossy's First Romance," "The Prince of the Golden Sea," and "The Making of a Man," all short stories; "A History of the Hospital," "The Hospital From the Patient's Viewpoint," "Woman," a poem; also poems entitled "On the Occasion of ———'s Birthday," "The Goldenrod," "Life," "To An Old Lady," "Eternal Wisdom," "Don't Worry," "Let There Be Peace," "Inspiration," and "A Song of Peace and Praise." One of the most interesting bits of verse is "An Ode to the Sea," written by the first woman patient of the institution, who entered in 1876. The first stanza runs:

"Oh, dread, mysterious Sea!
Fair Undine rises from thy sparkling wave,
Where many a soldier brave has found a grave,
And where Ulysses erstwhile by sirens was beguiled,
And Aphrodite from the waters smiled."

Another:

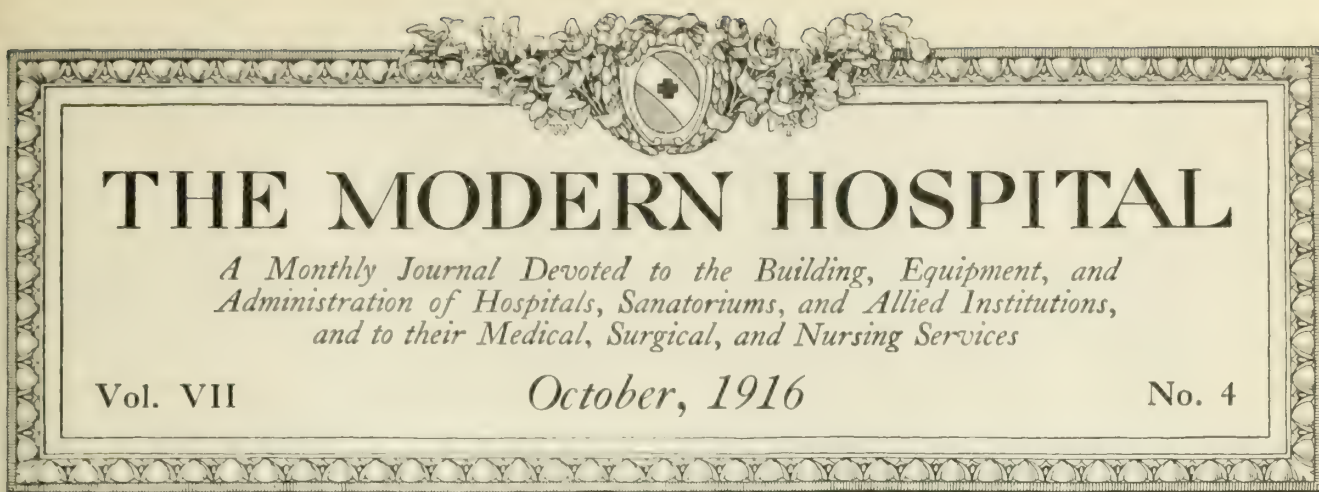
"Oh, melancholy Sea! What longings stir in me
To seek forever on thy bosom wide
The boon of rest and peace on earth denied,
And where the stars shall shine
Forever on the quiet grave of mine."

For a "filler" one patient wrote:

"Our typo whispers in our ear
That eight more lines are needed here,
And with nerve symbolic of his race
Directs us here to fill this space.
Thus restricted, what one lone pen
Can impart is beyond our ken;
We know a grist of spicy stuff,
But, you'll observe, we have enough."

The recreation activities of the institution have not been overlooked. There is half a column of "Golf Notes" and a whole page of "Baseball News."

Employees of the Massillon State Hospital, Massillon, O., have formed a union with the view of securing a shorter working day. The organization, which is the first of its kind in the state, is of a permanent character, and is to be affiliated with the American Federation of Labor. Members say that they are now required to work as many as twelve and fourteen hours a day.



THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. VII

October, 1916

No. 4

THE HOSPITAL AND THE SURGEON¹

The Making or Training of the Surgeon—The Selection of the Staff Surgeon—His Compensation—Promotion of Surgical Work—Regulation or Control of the Surgeon—Hospital Monopoly

By S. S. GOLDWATER, M. D., SUPERINTENDENT MT. SINAI HOSPITAL, NEW YORK

THE purpose of this discussion of the relations between the hospital and the surgeon is to show how and to what extent surgical efficiency can be promoted by hospital organization and administration.

Francis Galton, who had two sisters, says in his autobiography that one was just and the other generous. When, as a child, they buttered his bread, one picked the butter out of the holes, while the other did not. On reviewing a preliminary outline of the present subject, I quickly determined to abandon the role of the generous sister, and to adopt that of the just one. The subject proved to be too many-sided to be treated fully in a single address, and so I have picked the butter out of the holes, and have thus succeeded, I trust, in reducing the discussion to reasonable limits.

With a view to the orderly presentation of the subject, I have adopted six subheadings, under each of which several related topics will be treated. These subheadings are (1) the making or training of the surgeon, (2) the selection of the surgeon, (3) his compensation, (4) the promotion of surgical work by means of organization and equipment, (5) the regulation or control of the surgeon, and (6) the question of "hospital monopoly."

In the selection of its intern staff, the hospital to a great extent determines who shall and who shall not receive surgical training. The intern of today is the visiting surgeon and the surgical consultant of tomorrow; the selection and training of

hospital interns is, therefore, of fundamental importance. The choice of hospital interns ought to be directed by a prophetic insight, which is generally lacking in hospital committees. In the absence of trustworthy intuition, one is bound to exercise reasonable caution. It is certain that interns should not be assigned to their respective duties in the hospital in hit-or-miss fashion, but that their capacities, tendencies, and character should be carefully considered. After making the first departmental assignment, the hospital can do or leave undone much that is essential to proper surgical training.

The duration of the intern's service is important; a hospital may choose to give many men a smattering of surgical knowledge and a moderate degree of surgical skill, or it may train a few men thoroughly. The hospital which graduates a house surgeon in six months contributes little to surgical progress. At the other end of the scale is the hospital which, under a system of graduated promotions, keeps its residents indefinitely—a plan which has much to recommend it in individual instances, but the general adoption of which would unduly limit the privilege of surgical training. The middle course, which at present is followed by most hospitals in this country, provides for a period of training of not less than twelve and not more than twenty-four months.

No definite recommendation will here be made concerning the duration of surgical internship; I wish to lay stress on the quality of the training rather than its duration. For example, the intern whose aim is surgery should not have his attention directed to surgery exclusively at the outset

¹Read before the eighteenth annual conference of the American Hospital Association, Philadelphia, September 26-29, 1916.

of his hospital career; the training of the surgeon-to-be should preferably be "mixed," including a period of service in medical wards. The medical point of view, once acquired, will not be readily discarded; as an asset to the surgeon, it is invaluable.

So much time is necessarily spent by the surgical staff in performing operations and treating wounds, that the more refined methods of diagnosis and observation which are more easily and more generally practiced in the medical wards are often neglected. The surgeon is frequently called on to treat a localized physical condition which is perfectly patent and which demands prompt operative relief; hence his characteristic habit of making a snap diagnosis, a method which, for surgical purposes, is often singularly effective. An abscess may advantageously be opened, or a hemorrhage successfully controlled, without an exhaustive inquiry into the patient's family history, and without the performance of searching clinical tests. The habit of rapid diagnosis may, however, be carried too far. Certainly it tends to preclude the more careful, deliberate, and thorough investigation which is often essential to the correct diagnosis of obscure or complicated pathological conditions, and which is more likely to be practiced by the visiting staff, and therefore learned by the intern, in the medical wards.

In ideal practice, a medical diagnostician would be associated with every busy surgeon. Under the ordinary conditions of private practice, such association is not always possible; the surgeon, consequently, must be not only operator, but diagnostician as well, and it is because, in after life, he will frequently carry this double responsibility, that the beginner should not be plunged too quickly into the alluring atmosphere of the operating room, where all the conditions favor quick decision and action, but should first be trained thoroughly in diagnostic investigation, an art which attains its highest development in the medical wards.

If it is true that the surgeon should have some preliminary training in medical diagnosis and therapy, it is no less true that his preliminary education should include a course in pathology. Since we are viewing the subject from the point of view of hospital administration, let me suggest that the hospital laboratory be thrown open as widely as possible to the surgical intern and the junior visiting surgeon. The provision of opportunities for the study of pathology by those who are ultimately to be the hospital's chief surgeons will prove to be a profitable investment.

The selection of an attending surgeon is rarely accomplished without criticism. The criticism of

disappointed candidates and their friends cannot be avoided, and the appointing authority need not take such criticism too seriously if the selection has been made conscientiously. Just how to ascertain the relative merits of the candidates is a difficult question.

In Chicago the municipal hospital authorities have adopted the plan of holding a competitive examination, and of appointing as visiting surgeon the candidate who obtains the highest rating. At first blush such a plan appears to be impracticable, but experience has demonstrated that it is possible to make surgical appointments or other professional appointments of similar grade under civil service rules, provided the rules are wisely framed. The rating of the candidates must, of course, be left to competent persons. One of the highest developments of the merit system is the employment by civil service commissions of specially qualified examiners, expert in their respective fields.

A competitive examination, honestly conducted, will at least eliminate the totally unfit, a result which is by no means assured in municipal hospitals which are under unchecked partisan political control. It is just as practicable for civil service examiners as it is for private hospital boards to make proper allowance for personality, training, and for the diagnostic and operative skill shown in the past performances of the candidates; civil service examiners are under no compulsion to limit their attention to the candidate's ability to answer text-book questions.

Those who are disposed to regard the competitive system as impracticable are invited to compare the best results achieved under that system with the worst results obtained in municipalities where public and professional opinion has not been developed to the point of demanding a high quality of service in municipal hospitals, and where all checks on partisan abuse are absent. In the course of an official investigation of an important municipal hospital in 1913, the writer encountered an interesting case of stubborn rebellion on the part of the members of the house staff. The grievance of these men was that, after their appointment from the graduating class of the local medical school by means of a competitive examination, they found themselves suddenly confronted with a full-fledged visiting surgeon, formerly a member of their own class at medical school, *who had failed to qualify as an intern*, but whose political influence had been so potent as to accomplish his immediate elevation, with no preparation or fitness whatever, to the position of visiting surgeon. The indignation of this man's classmates was not without cause, nor their re-

bellion unjustified. To such a disgraceful and dangerous appointment the merit system presents an insuperable obstacle.

The possibilities inherent in the merit system (commonly known as the "civil service" system) have recently induced the chief of staff of a highly progressive hospital in Brooklyn to suggest that this system be applied to the conduct of private as well as public hospitals. Efforts are being made to work out a standard rating system.

Lay trustees are probably more nearly impartial in the designation of medical appointees than medical men would be; laymen, at all events, are less likely to be influenced by personal or professional relations with the candidates, and are in a better position to make a calm and thorough canvass of the field in search of the best men available. Hospital trustees are not wholly unreasonable who decline to bestow the power of appointment on medical men without a check. They may wisely retain the appointing power in their own hands; but, recognizing that technical matters are best judged by experts, they should not act without the assistance of medical advisers.

I have yet to encounter a safer system than that which provides that, on the occurrence of a staff vacancy, a committee jointly representing the lay board and the medical board be convened to prepare a list of men eligible to fill the vacant post. Any candidate who successfully withstands the fire of criticism which is leveled at him in the course of a joint committee meeting of this character is pretty certain to possess at least the necessary minimum qualifications. In one institution the list of eligibles created by the joint committee is subsequently intrusted to the lay committee alone; this committee makes a selection, and recommends the nominee to the medical and lay boards in turn for confirmation. This system includes all possible safeguards. Although the actual nomination is made by a committee of laymen, the proposal of any candidate whose qualifications have not been approved by the medical members of the joint committee is impossible. A further safeguard is provided by intrusting the veto power to two larger bodies of medical men and laymen respectively.

But in spite of all precautions, an appointment may prove to be unsatisfactory for one reason or another. A surgeon who is personally competent may fail to become a congenial or an efficient member of the staff. On account of this possibility, it is wise to regard all appointments in the junior grades, at least, as trial appointments only, subject to cancellation at the expiration of a probationary period. The idea that a surgeon who has once been appointed to a hospital position

thereby acquires a lifelong claim on the job is inadmissible.

The trustee's family physician is forever bobbing up as a hospital candidate, seeking surgical or other important appointments. Within the past three years two of the most important medical administrative positions in the country, one a hospital superintendency and the other a health commissionership, have been given to the family physicians of mayors. In both instances these appointments were given to men wholly inexperienced in the work assigned to them, and claiming no suitable qualifications. It is with a view to the prevention of mistakes of this sort that it is suggested that hospital appointing committees include members of the medical staff; by this means the error of any trustee who might venture to make a wholly inappropriate nomination would be readily disclosed.

In the selection of a surgeon, trustees may be unduly impressed by popularity. A surgeon rarely acquires a large clientele unless he is competent to operate, but the most popular surgeon is not always entitled to hospital preferment. A surgeon whose private practice is so large as to exhaust his time and energy cannot be expected to be punctual in attendance on the wards, or to be deliberate, careful, and thorough in examining ward patients. This is the type of surgeon who sees his patient for the first time in the operating room, and who is content to leave diagnosis and other preliminaries in the hands of the house staff. Such a surgeon may be entirely willing to give his best service to the hospital, but he is not in a position to do so.

The function of the hospital is a dual one—first, to care for its patients, and, secondly, to contribute to the advancement of medicine. No hospital may rightly neglect either of these functions. A surgeon who is so preoccupied by private practice that he cannot interest himself in research work, cannot train his assistants, and cannot co-operate freely with the laboratory staff is one whom the hospital can afford to pass by.

The mistake is often made of appointing to a hospital position a surgeon who is already identified with several other institutions; this is analogous to the appointment of a man who is over-occupied with private practice. It is evident that when such an appointment is made somebody must suffer. If the new appointment is more attractive than the old, the appointee will give more attention to his new than to his old responsibilities, a result which raises the question of fair play. It is conceivable that one hospital may rank distinctly higher than another in the professional opportunities which it offers, and that the

appointment to such a hospital of a man already holding a position elsewhere would be a deserved promotion. The ranking hospital, under such circumstances, has the right to offer an appointment to the man of its choice; but if the appointment is accepted, the situation must be frankly faced by the appointee, who should not attempt to monopolize the field or to undertake impossibilities.

Hospitals depend on the good-will of the communities they serve. Local public opinion, therefore, is nearly always an important factor in determining the official acts of the hospital management. To offend local opinion is not good policy; and yet it may be necessary to do this in order to protect the hospital's higher interests. If, for example, an important position is open, and the man who is most conspicuously qualified to fill it happens to be a resident of another city, local pride will rebel against his appointment and will urge the nomination of some local practitioner. The hospital board which encounters such a situation is in a difficult position. If the nonresident candidate is appointed, the hospital will lose the good-will of some of its friends; but this loss is temporary, and in the long run will be offset by the added reputation which the better qualified candidate will eventually bring to the hospital. Geographic limitations, then, should not be permitted to govern too strictly. It is gratifying to observe that hospital boards are more and more asserting their right to look anywhere for men who are qualified to raise the hospital to the highest efficiency.

No discussion of the selection of the surgeon would be complete which failed to take account of an extremely common situation—namely, the candidacy of a surgeon who has long served the institution in its out-patient department against that of one who has given no such service. The lot of the dispensary surgeon is not a particularly happy one. With rare exceptions, dispensary service continues to be performed gratuitously, and, while the hospital is not justified in promoting from its out-patient department a man who is not fitted to do the work that will be demanded of him as visiting surgeon, fair play demands that the out-patient surgeon, with a record of ungrudging service to his credit, shall be preferred to an outsider whose qualifications are not distinctly superior.

In the hospital, as well as in the dispensary, the surgeon usually works without salary or fee. While the hospital surgeon sacrifices time and strength to the needs of ward patients, his sacrifices are offset by the opportunities that his position brings to him. To succeed in surgery without

a hospital appointment is an uphill fight; as surgical work increases in complexity and demands increasingly the support of other diagnostic and therapeutic departments, it becomes more and more difficult for a surgeon to practice independently of a hospital. In the hospital the surgeon has consultants at command; he likewise commands the facilities of the laboratory and of the x-ray department, and the invaluable services of the resident medical and nursing staffs. The prevalent keen competition for unsalaried hospital positions indicates clearly enough that the acceptance of such a position is not an act of unadulterated self-sacrifice, and that indirect rewards are hoped for.

The hospital may experience difficulty in enforcing discipline on a surgeon who must get his living outside of the hospital. This situation must be faced frankly. Conceding that the strict enforcement of hospital regulations does occasionally work great hardship on the visiting surgeon, the primary consideration is to provide adequate care for the hospital's patients. If this cannot be obtained from the assigned visiting staff, a new unpaid staff must be substituted which can and will give the required service, or the system must be changed. Changes in system have already been tentatively made in a number of notable instances. The change which is most commonly urged is the substitution of a full staff of salaried visiting surgeons for an unsalaried staff; a modification of this system is the appointment of a full-time salaried chief of service to direct the work of the unpaid subordinate attending surgeons.

The appointment of full-time salaried visiting surgeons has been effected in certain cases not so much for the purpose of insuring adequate attention to hospital patients as to promote research and to develop teaching. Hospitals which have thus committed themselves to a policy of research and education have been interested not only in the highest development of their own staffs, but in the education of undergraduate students, an attitude which is worthy of commendation. Much emphasis is placed nowadays on the clinical training of the medical student, and it is obvious that such training cannot be given by a medical school which does not command the facilities of a suitable hospital. Hospitals that disinterestedly lend themselves to the purposes of medical education are pursuing a wise social policy, and are serving many patients besides those in their wards.

Salaries may be paid to visiting surgeons for less than full-time service. The trustees of the most important municipal hospital in New York city are committed to the payment of salaries to

the chiefs of their medical and surgical services, respectively, for a minimum of four hours of daily service. This policy has been advocated on the ground that the required service cannot be obtained on any other terms, a claim which it is difficult to understand in view of the fact that other New York hospitals possessing no greater attraction to surgeons of high standing have no difficulty in obtaining the men needed or in holding them to the observance of exacting rules. To assert, however, that it is possible for such hospitals to obtain service gratuitously is not to argue against the justice of paying salaries to the visiting staff; the ethics of the proposal is one thing—its necessity or expediency is quite another.

Reference has been made to two forms of compensation—namely, financial compensation and compensation in opportunity. There is a third form of compensation which has, perhaps, an indirect money value. I refer to the facilities which are placed at the disposal of the surgeon by hospitals which care for both free and private patients. If the surgeon's principal income is derived from the operations which he performs on well-to-do patients, it is of value to him to be able to offer to such patients the facilities of a well-equipped private hospital. Furthermore, if he is to give his services gratuitously to ward patients, it is advantageous to be able to do so with a minimum expenditure of time and effort. Both of these objects are realized when the hospital places at the disposal of the surgeon a well-equipped private ward in close proximity to, if not under the same roof with, the public wards in which he spends part of each working day.

Although, as a rule, the charge which a private patient pays to the hospital is sufficient to cover the cost of maintenance, some hospitals care for private patients at less than cost, thus indirectly contributing out of their general funds toward the support of a department from which the visiting surgeon derives benefit.

With rare exceptions, the professional fees paid by private hospital patients remain in the surgeon's hands, no part of such fees being claimed by the hospital for its share of the service rendered. On the other hand, the practice in respect to surgical fees for operations performed on ward patients varies widely. In many staff hospitals the admission of ward patients is restricted to persons in reduced circumstances, and the payment of fees is forbidden. In other hospitals so-called "free" wards are not absolutely free; in these hospitals ward patients may be received gratuitously, or may be permitted to pay part of the cost, or even the full cost, of their maintenance. It is not exceptional for hospitals to permit the collection

of professional fees from ward patients who pay to the hospital part of the cost of maintenance.

The matter of compensation for surgery practiced on ward patients has been recently affected by the enactment of workmen's compensation laws, under which a class hitherto regarded as entitled to gratuitous hospital care is now received in hospitals under regulations which provide for the payment of hospital maintenance rates as well as for the payment of moderate surgical fees.

[To be concluded in next issue.]

American Association for Study and Prevention of Infant Mortality

BY GERTRUDE B. KNIPP

This association was organized in November, 1909, following the conference held at Yale University by the American Academy of Medicine. The association is under the impression that "no phase of conservation is so important to the state as the life and health of its infants." The objects of the association are: 1, to study the causes of infant mortality—to awaken an interest in the possibility of reducing the present unnecessary waste of infant life and to formulate plans for preventive work; 2, to act as a clearing house for the collection and dissemination of information regarding infant mortality and the work being done to prevent it.

Following the conference held at Yale University, headquarters were established in Baltimore on January 1, 1910. A brief outline of the work carried on by this office consists of: 1, correspondence from central office; 2, investigations and studies by standing and special committees; 3, annual meeting and the publication of annual transactions; 4, terms and management of traveling exhibit.

Organizations as well as individuals are eligible for membership. Affiliated membership is open to any society that is either interested or engaged in baby-saving work. At the present time there are over 150 organizations affiliated and over 950 individual members. The affiliated membership includes infant welfare societies, nurses' organizations, departments of health, women's clubs, departments of home economics, medical organizations, etc. Forty-two states, the District of Columbia, Hawaii, Panama, the Philippine Island, Canada, England, China, and New Zealand are represented in the enrollment.

It is estimated that not less than 250,000 babies under a year old die annually in the United States. Work that has been accomplished shows that at least half that number could be saved and started toward sturdy manhood and womanhood through the application of known principles of medicine and hygiene.

There are several classes of members, whose dues are as follows: life, \$200; sustaining, \$25 annually; contributing, \$10 annually; active, \$3 annually; affiliated societies, \$5 annually. The various classes of members are entitled to all publications.

By a vote of four to one, citizens of Jones county, Miss., on September 6 authorized a \$20,000 bond issue toward the erection of a state charity hospital at Laurel. The city of Laurel voted \$30,000 for the same purpose several months ago, and it is expected that the hospital will be located at Laurel by the state Legislature at its next session.

METROPOLITAN LIFE INSURANCE COMPANY TUBERCULOSIS SANATORIUM

New and Elaborately Equipped Group at Mt. McGregor for Employees of the Company an Excellent Example in Architecture and Fittings—The Principles of Treatment of Patients—The Farm an Important Feature—Historic Surroundings Where Grant Died

By H. J. HOWK, M. D., Physician in Charge, and D. EVERETT WAID, Architect, New York

INCEPTION AND UNDERLYING PRINCIPLES
BY DR. HOWK.

THE idea that a corporation like the Metropolitan Life Insurance Company could build a sanatorium for the care of its tuberculous employees had its inception in the winter of 1908-09, when the exhibition of the International Tuberculosis Congress was brought from Washington and

exhibited in New York. The company's clerks and agents were invited to visit the exhibit, after which addresses were delivered by physicians well known in the antituberculosis crusade. At this meeting it was proposed that the Metropolitan should build and maintain a sanatorium for its employees. The proposal met with the favor of the officers, and steps were taken to secure the consent of the state insurance department. The superintendent of insurance expressed a doubt as to the right of an insurance company to purchase real estate on which to build a sanatorium. The question was then submitted to the supreme court, which rendered a decision declaring that it was not only the right, but the duty, of the directors

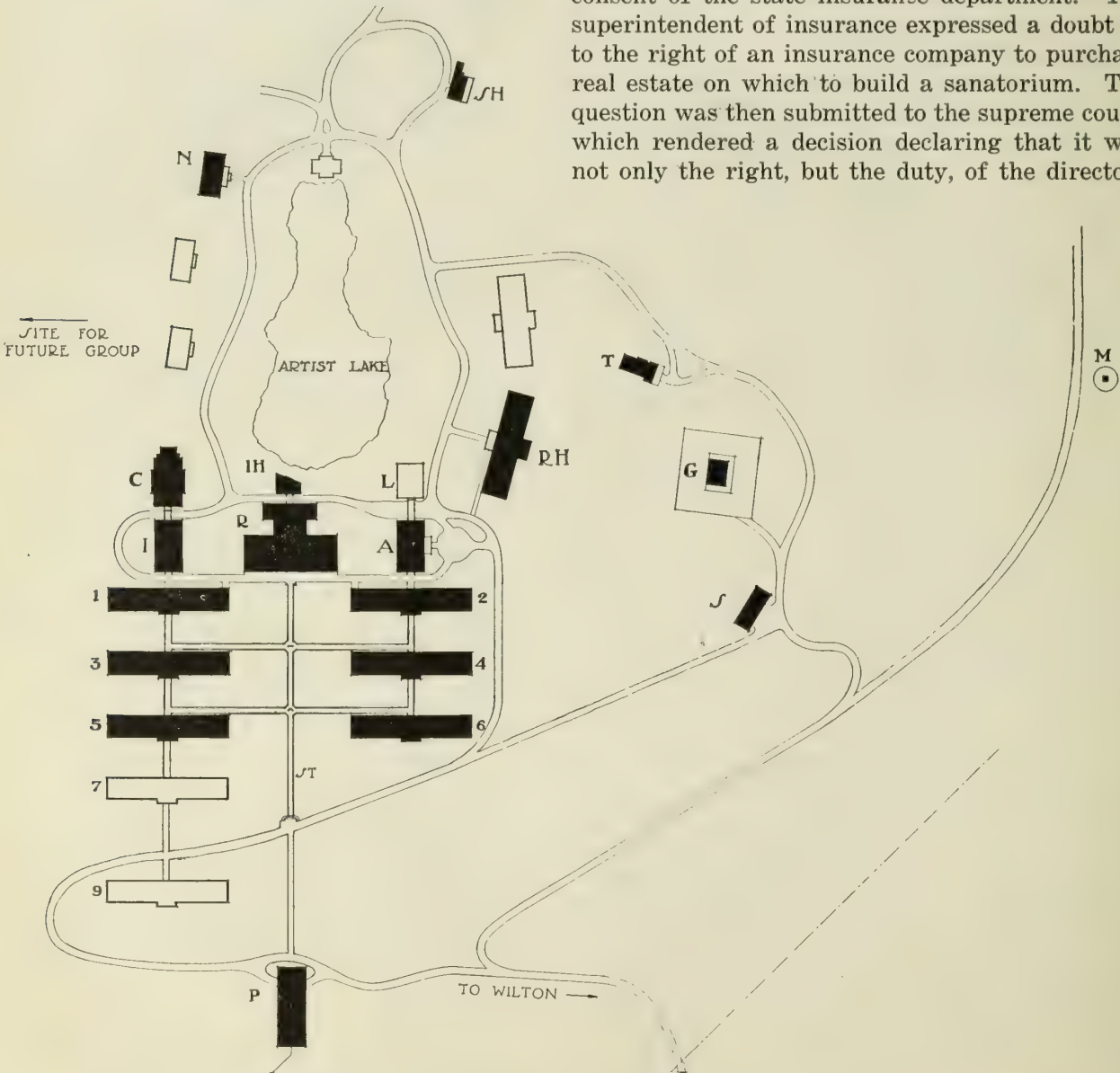


Fig. 1. Sanatorium of the Metropolitan Life Insurance Company. Block plan.

- | | | | | |
|-----------------------------|---------------------|-----------------------------|--------------------|---------------------|
| A. Administration building. | N. Nurses' cottage. | SH. Superintendent's house. | G. Grant cottage. | ST. Service tunnel. |
| C. Chapel. | P. Power house. | W. Water tower. | M. Grant memorial. | S. Stable. |
| I. Infirmary. | PH. Pump house. | 1 to 9. Ward buildings. | RH. Rest house. | |
| IH. Ice house. | R. Refectory. | T. Temporary ward. | L. Laboratory. | |

of a corporation, without consultation with the stockholders, to take reasonable care of its employees.

At the outset it was planned to care only for employees suffering from tuberculosis, and the site was selected and the buildings designed which would meet the conditions best suited to the treatment of this disease. A study of the available data was made to determine the number of beds necessary to care for cases arising among the 16,000 employees.

The general plan of treatment followed in the sanatorium consists of rest, fresh air, diet, and graduated exercise. A suitable number of single rooms is provided in the infirmary, so that every incoming patient can be kept in bed until the diag-

road leading to the sanatorium ascends for the distance of a mile, making a grade varying from 6 to 10 percent, which is used only by those patients who have nearly completed their "cure" and must have their walking ability tested before resuming work. It may be said here that the Metropolitan Life Insurance sanatorium is one of the very few hospitals of its kind from which patients are returned directly to work. The majority of tuberculous individuals, on leaving a sanatorium, spend periods of idleness, varying from a few weeks to several months, before resuming work. It is important, therefore, that our patients should be "tested out" as carefully and thoroughly as possible before discharge. With the limited number of occupations repre-

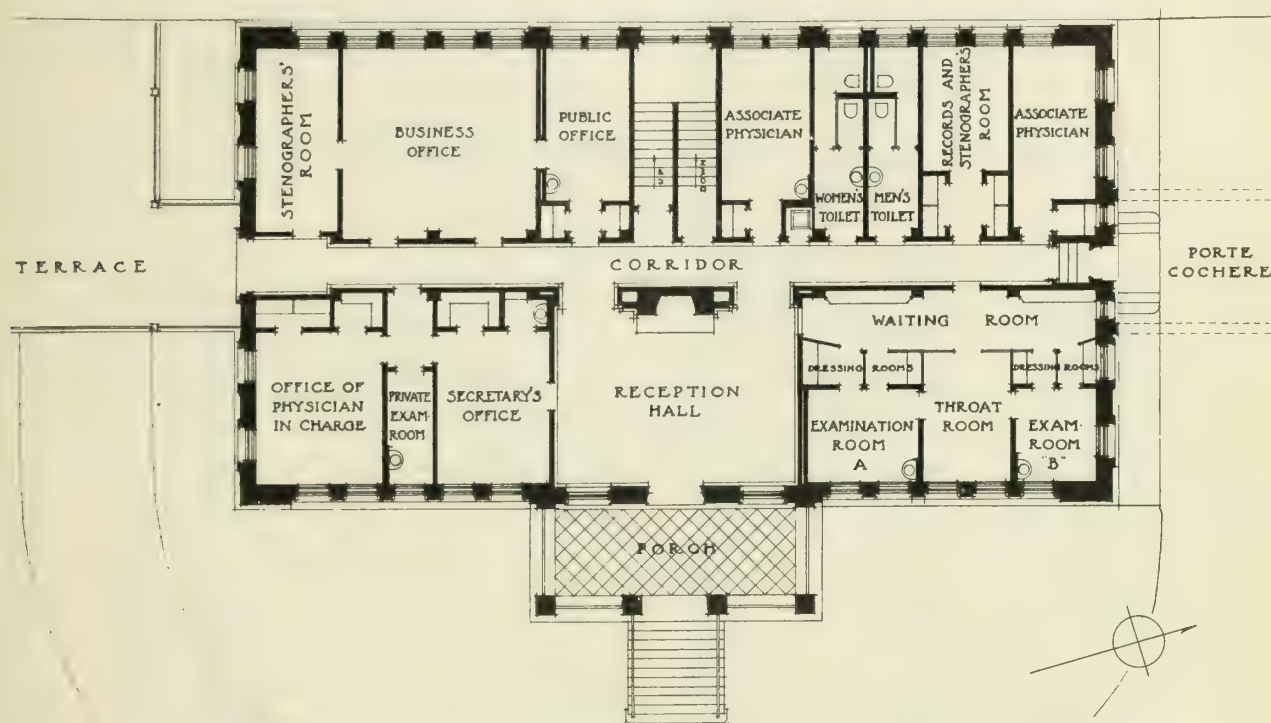


Fig. 2. Sanatorium of the Metropolitan Life Insurance Company. Administration building. First floor plan.

nosis is completed and constant bed treatment is found no longer necessary. With beginning convalescence the patient is transferred to the ground floor of ward building No. 1 or 2, which are provided with diet kitchens, and make possible the continued or partial bed treatment when necessary. As recovery progresses the patient is moved to other wards, the walks from which afford a moderate incline. By this method the strength of the patient gradually increases to meet the demand made on it. Numerous level walks in the vicinity of the buildings furnish exercise courses for beginning convalescents, or those whose pulmonary condition will not permit climbing grades. More extended roads lead through the woods to neighboring lakes, while the main

sented in the company's employees, it is possible to duplicate the majority of them, and provide the patient with work analogous to that in which he was previously engaged and to which he returns. For example, typewriters, filing clerks, etc., are given indoor work of this character, while agents who spend a good portion of their time walking from house to house are given outdoor exercise of a similar character, the effort being to habituate the body and mind to work, and thus make as natural as possible the transition from idleness to employment. It is still too early to ascertain whether this preparatory treatment has a lasting or permanent value, and only careful observation of cases over long periods of time, and comparison of statistics with other groups

under differing conditions, can determine its worth. The experiment has been carried on sufficiently long, however, to demonstrate that the readjustment of the patient to regular working conditions is made with a minimum of mental and physical effort, loss of weight, and malaise—symptoms commonly experienced by tuberculous individuals on resumption of a regular occupation following sanatorium treatment.

Although, at the outset, plans were made to care for only tuberculous employees of the company, it was soon realized that employees with

ing, lately completed, will provide single rooms for such patients as require isolation and complete rest, and double rooms and two dormitories for those employees needing only "building up."

A laboratory for routine and special work is provided in the infirmary and another in the rest house, but it is hoped that a laboratory building adequate for such researches as may most advantageously be undertaken will be provided in the near future. In this building will also be housed the electrocardiograph, which will be connected to rooms in the infirmary, rest house, and

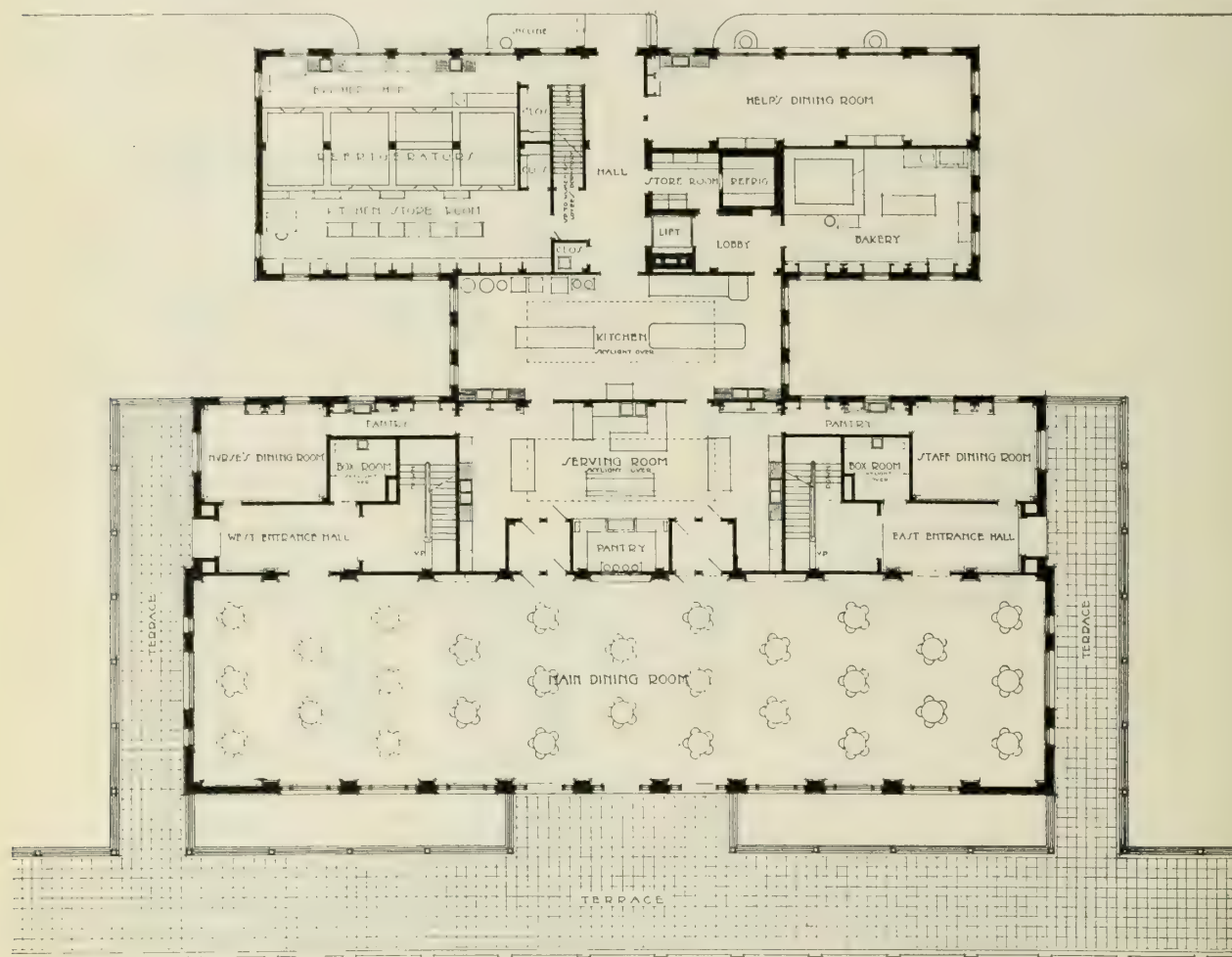


Fig. 3. Sanatorium of the Metropolitan Life Insurance Company. Refectory. Floor plan.

other diseases would be benefited by the kind of treatment that could be provided in a country sanatorium; that the rest, fresh air, supervised dieting and exercise, so necessary in the treatment of tuberculosis, would be of equal benefit in anemia, diabetes, nephritis, heart disease, gastric and intestinal diseases, nervous diseases, etc., and a few of these cases were brought to the sanatorium during its first year, with sufficiently good results to warrant the building of a rest house, with accommodations for 80 patients. This build-

ing examination rooms in the administration building.

Fresh fruits, vegetables, and milk, so essential in the treatment of disease, are produced on the sanatorium farm at the foot of the mountain. Fifty-five Ayrshire cows comprise the herd, and the fat content averages 4 percent throughout the year. A herd of fifty Berkshire pigs supplies pork to the sanatorium, and these are fed almost exclusively on the table scraps, which are sterilized in a specially built garbage can (described in *THE MODERN HOSPITAL* of March, 1916).

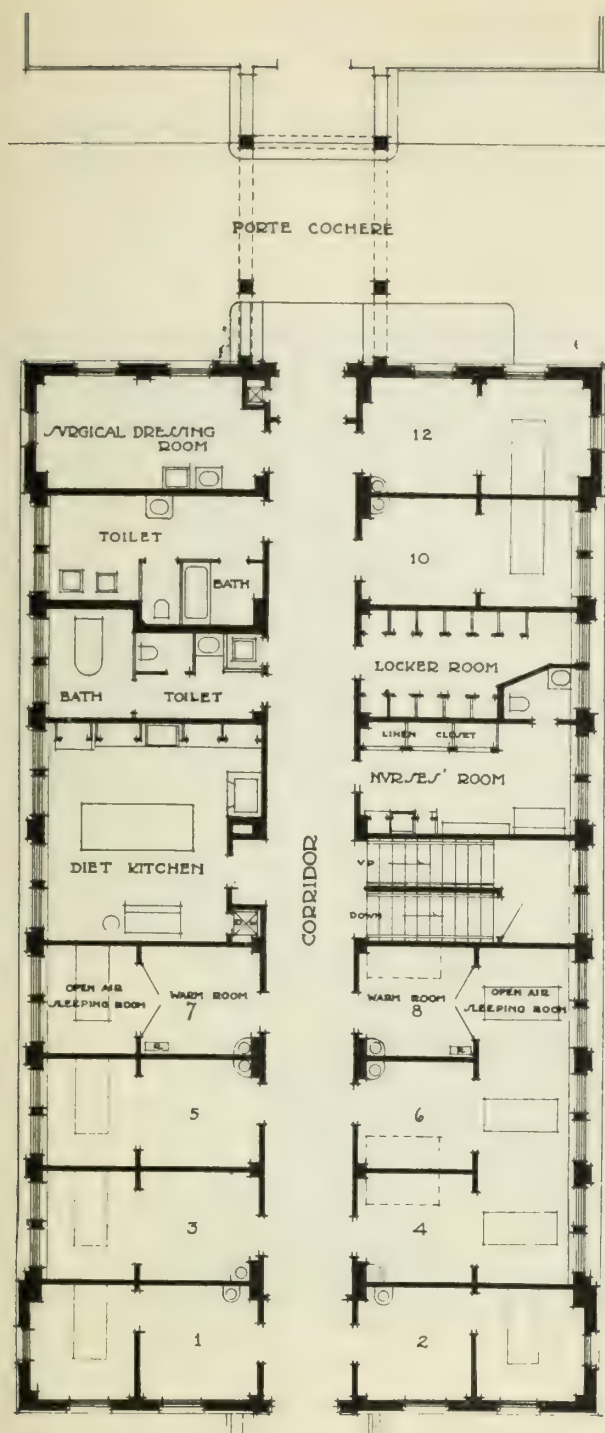


Fig. 4. Sanatorium of the Metropolitan Life Insurance Company. Infirmary. First floor plan.

ARCHITECTURE AND EQUIPMENT

BY D. EVERETT WAID.

The institution is located at Mt. McGregor, New York, one and a half miles from the village of Wilton and nine miles north from Saratoga Springs. The property comprises 500 acres, not including the farm. Looking from the sanatorium site to the west may be seen the foothills of the Adirondacks; to the south, Saratoga Lake, and in the distance the Catskills; to the east the Schuylerville monument, which commemorates

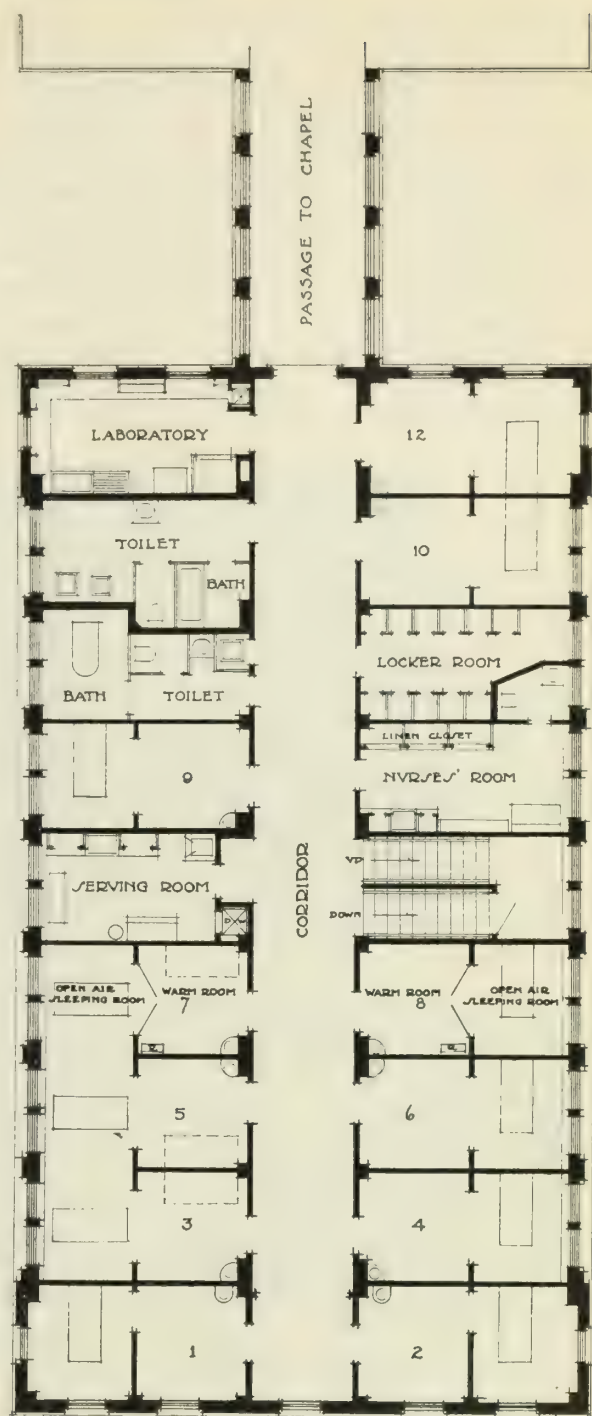


Fig. 5. Sanatorium of the Metropolitan Life Insurance Company. Infirmary. Second floor plan.

the battle of Saratoga; Bemis Heights, where one of the revolutionary battles was fought, and in the distance the Green Mountains. The level of Artist Lake, which is in the center of the group of buildings, is 1,046 feet above the sea. The mean maximum temperature in summer is 92 and the extreme minimum temperature in winter during the past three years occurred in January, 1914, 32 degrees below zero. The sanatorium was opened to receive patients in November, 1913, but some of the wards and the administration building were not then erected. The number of pa-

tients which will be accommodated in the whole group of buildings now being completed will be 322, and the number of patients at the sanatorium when this is written is 190.

The foundation walls are of rubble stone (gneiss), quarried on the site; the superimposed walls are of hollow tile, stuccoed; the floors and roofs are of reinforced concrete, the roofs being covered with red tile; the finished floors, in general, are of Portland cement concrete; the toilet room floors are vitrified white tile; the kitchen floors are green slate; the corridor floors are concrete, covered with linoleum; and the bed rooms

wheeled chair or food cart to be run from any ward bed to the dining room or kitchen without passing a step.

The main driveway in front of the refectory is covered, and connects the five central buildings—the administration building, refectory, infirmary, and wards Nos. 1 and 2—and provides a level and dry outdoor walk in stormy weather and in fair weather an elevated terrace, from which is ob-



Fig. 7. Dining room of refectory; first group of patients.



Fig. 6. View in ward building.



Fig. 9. Kitchen of infirmary.



Fig. 8. Kitchen of refectory.

in the rest house have magnecite composition flooring.

The sanatorium consists of a group of three head buildings—administration, refectory, and infirmary—several open wards, rest house, and power house, located on the southern slope of Mt. McGregor, exposed to the prevailing southerly breezes of the summer and protected by the mountains and forests from the northerly storms of winter. The graded walks make it possible for a

tained a magnificent panoramic view of the Hudson Valley.

The first building of the group reached from the drive up the mountain is the administration building. It provides offices for the physician in charge, assistant physicians, business manager, and accounting and clerical assistants. Adjacent to the main reception room are examination rooms, with waiting and dressing rooms arranged to facilitate the examination of a large number of patients with little loss of time and space. Medicines are issued from the pharmacy in the ground story. In the ground story is located also a hydrotherapeutic department, with special cooling and heating facilities to insure desired

temperatures. Dressing rooms, steam-heated cabinet, etc., are planned to facilitate the use of this treatment as far as it may prove advisable. The upper portion of the administration building is devoted to individual bed rooms for the staff and for guests, and to a library and sitting room for their use.

The central and largest building of the group is the refectory, the ground floor or basement of which is intended for convalescent patients' work rooms, library, recreation rooms, storage, etc. Incidentally it may be noted that thus far practically no work has been done by patients, except basket making, which has proved to be popular. A government post office is provided in this story, and also a press room for the *Optimist*, a weekly

date a nurse and three or four patients. This was used once in three years for two scarlet fever cases. The rest of the time the isolation ward has proved to be attractive living quarters for interns.

Across the drive from the cold storage rooms is the ice house, with a capacity of 500 tons, which is built into the embankment on the southern edge of Artist Lake, which supplies the ice. The third head building is the infirmary, just west from the refectory. The basement, on a level with the drive at the south, contains waiting rooms, x-ray and dark room, patients' trunk room, autopsy room, etc. The first story, which is on a level with the drive at the north, contains, aside from the separate bed rooms, one for each patient, a diet kitchen, surgical dressing room, and bath



Fig. 10. Group of ward buildings; wards Nos. 3, 2, 4.



Fig. 11. Typical ward building; ward No. 3.

paper published by the patients. The main front portion of the refectory is devoted to the dining room, 32 feet 10 inches wide, 132 feet long, with a vaulted ceiling 24 feet 6 inches high, commanding a view of the

Hudson Valley and Saratoga Lake directly to the south. North of the main dining room are the nurses' and staff dining rooms. In the center is a large double serving room, approached from the main dining room through vestibuled doors. Back of the serving room, which contains mechanical dishwashing apparatus, etc., is the kitchen, with ranges and all cooking apparatus under a ventilated hood. Adjacent to the kitchen is the bakery. A butcher shop, grocery, cold storage rooms, and help's dining room are adjacent to the kitchen. The second story of the refectory (at the rear of the dining room) is set apart for female help bed rooms. Above this dormitory is an isolation ward, with an outside stairway, designed to accommo-



Fig. 12. Nurses' cottage.

rooms. The second story, which is similar to the first, has a serving room and a small laboratory. The stairways are designed for the convenient use of a stretcher in carrying a patient from first to second story.

The distinctive feature of the infirmary is the method of opening the entire exterior end of each room to the outer air, protecting it with fixed louver shutters, which permit free access of air and keeping out to some extent the sun, rain and snow. Each opening is provided also with double-hung glazed windows and with fly-screens. All of the shutters and sashes are kept down to the floor level when conditions permit. If necessary, the windows can be closed and the entire room of the patient heated. At the rear of each patient's bed glazed doors inclose a portion of the room, which in cold weather is heated and used at meal time and for bathing and dressing. Attention is called to the full opening of the win-

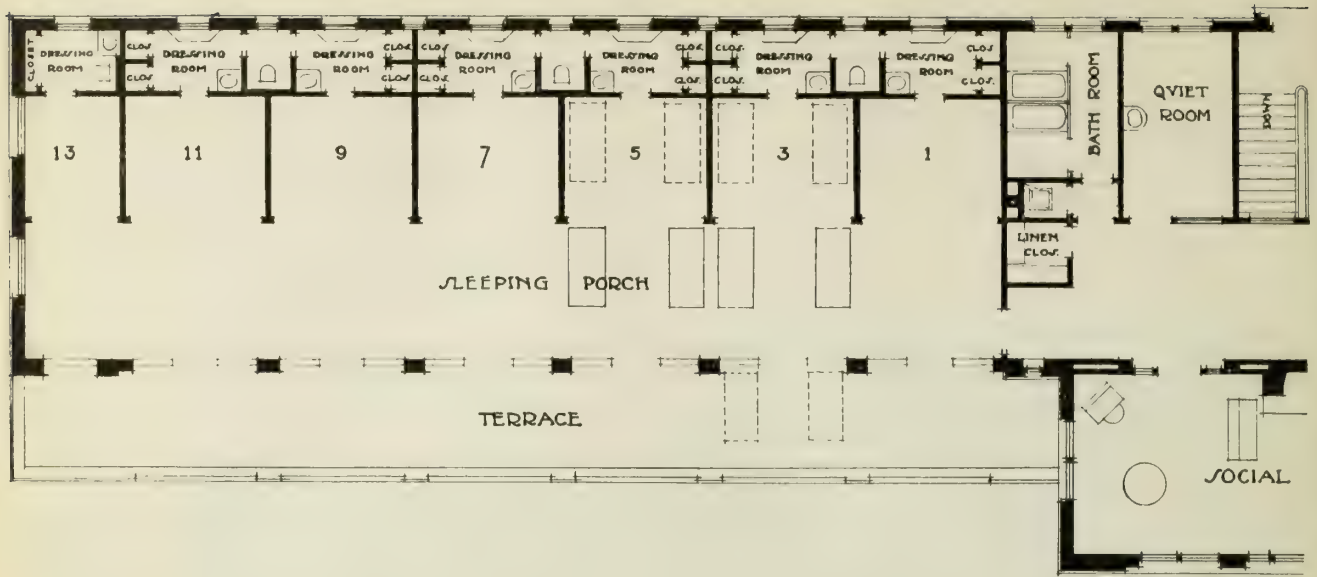


Fig. 13. Sanatorium of the Metropolitan Life Insurance

dows and the easily adjusted protection of the openly designed shutters of this building, which is used as a reception and observation ward as well as an infirmary for bed patients.

The chapel is connected by a glass inclosed passage with the infirmary, whence bed patients may be wheeled into the gallery of the chapel. A resident chaplain is provided with a sitting room, bed room, and bath in connection with the chapel.

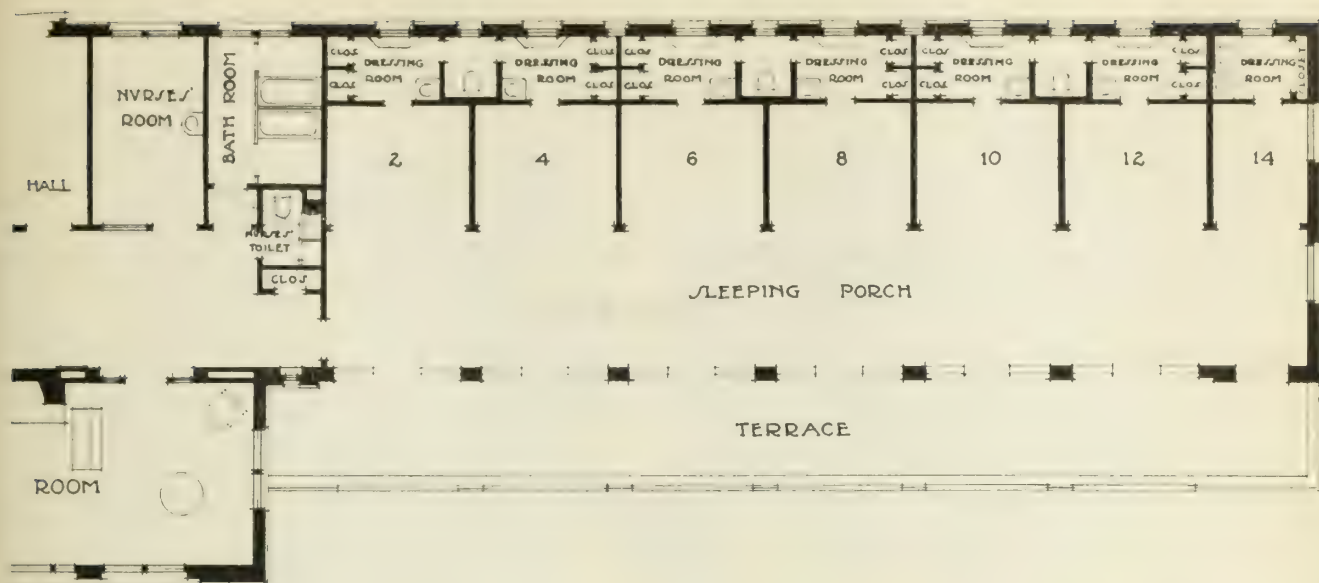
The ward buildings, the occupants of which are expected to take their meals in the main dining room, are a development of the so-called "shack" or "lean-to." Patients' reclining chairs and also beds are always out of doors, but under roof. The space, except in the outer veranda portion, is inclosed with flyscreens, and provided with a low balustrade designed to protect from driving rain and snow. The beds stand two in each alcove, and at the rear of each alcove is a dressing room for two patients, with a water closet between each two dressing rooms. Each patient has a wardrobe closet and half of a dresser. There is one lavatory in each dressing room, and each of the two patients has his own towel-bar and glass and toothbrush holder. A special feature of the lavatory is the rain supply, the water dropping in a spray directly to the outlet of the bowl (Fig. 18). Patients are expected to bathe in running water and not use stoppers in the bowls. Each bed alcove is flooded with sunshine from a skylight, which has a nonclosing ventilator, so that there will be a constant upward circulation of air above the beds. The alcoves are designed with a view of providing doors to close up the front, and some of the alcoves were experimentally provided with such doors, but their use, it is found, will not be necessary, even in the most severe weather, unless in an emergency.

In the central portion of each ward building are tub bath rooms, with showers delivering water at an angle and controlled by valves out of range of the spray, so that in bathing the head may be kept dry. A social room is also provided, and in the wide halls are specially designed overcoat and hat racks, with compartments for umbrellas and overshoes.

The power house contains the boilers and engine room, boiler feed pumps, emergency water supply pump, and electric transformers, with space for possible future electric generators. Coal is delivered in five-ton motor trucks into vaults with a capacity of 700 tons, and finds its way by gravity from the driveway to the front of the boilers. Ashes are raised on an electric hoist and delivered to wagons in the driveway. The story above the boiler room contains fully equipped laundry and sterilizing rooms. The soiled linen is collected in canvas bags, which, with their contents, are sterilized before being opened for sorting and sent to the wash room. The upper story is a dormitory for male help, and is provided with a sitting room, bath rooms, etc. Under the same roof with the power house is a garage and repair shop.

A closed passage, or tunnel, leads from the laundry floor up the hill, 750 feet, to the refectory. Employees may walk through this tunnel in stormy weather, and an electric railway carries laundry work and supplies to and fro. Waste material is delivered directly into an incinerator, and that part of the garbage which is fed to swine is passed through steam cookers and is then taken to the farm.

The tunnel contains pipe galleries carrying steam, water, drainage, electric cables, etc., and from the main tunnel branches from the various



Company. Typical ward buildings. First floor plan.

lines are carried through underground conduits to the several buildings. At the upper end of the tunnel in the refectory are large storage rooms for linen, linen repair rooms, mattress store rooms, with special racks, flour storage, storage for canned fruits, etc., with special shelving.

The nurses' cottage, northwest of Artist Lake, but within easy walking distance, is intended to have a homelike aspect, with a bed room for each nurse, or private sitting room if she chooses to use the common sleeping porch. On arising in the morning, each nurse may close her windows,

which has a capacity of 80 beds, will also provide facilities for treatment and study of employees who are run down, anemic, or who have minor ailments which may predispose them to more serious diseases. A considerable number of rooms in the building are for single beds, while other rooms are large enough to accommodate two beds each.

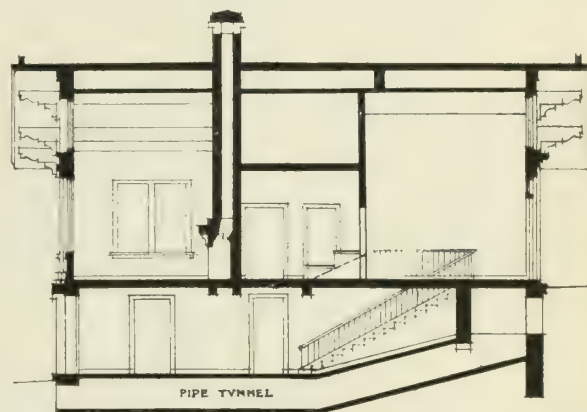


Fig. 15. Sanatorium of the Metropolitan Life Insurance Company. Typical ward. Section through social room.

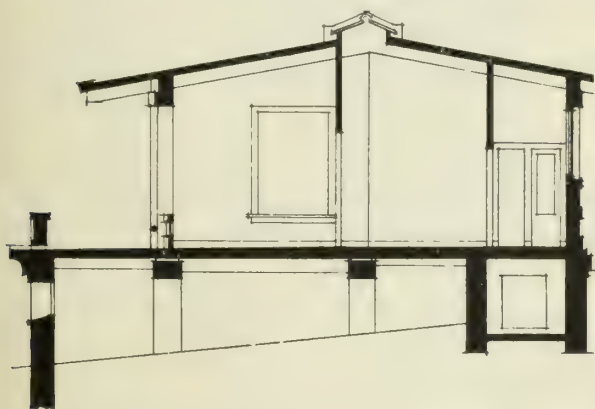


Fig. 14. Sanatorium of the Metropolitan Life Insurance Company. Typical ward. Section through sleeping porch.

remove the radiator jacket, and allow her room to warm while she steps into her heated dressing room. A comfortable living room in the first story is the center of social recreation for the staff. The residence for the superintendent or physician in charge is located northeast of Artist Lake.

The rest house is designed to care for those employees of the company who are suffering from diseases other than tuberculosis. This building,

In the third story are two wards of six beds each, with dressing and bath rooms adjacent. Large social rooms and open porches add to the comfort and attractiveness of the building, and in a central portion of each story a diet kitchen is provided for the preparation of food which it may be necessary to serve within the building.

North of the residence of the physician in charge is a reinforced concrete 50,000-gallon storage tank, supported on a stone tower. The water supply is taken from Lake Bonita, nearly a mile to the west, where it is treated with chlorine gas, and whence it is pumped by a gasoline pump to the water tower, aerated and filtered, and thence distributed by gravity to the various buildings. Artist Lake, which is an attractive landscape

feature in the midst of the group of buildings, is used for emergency water supply.

The sewage disposal plant is located on the lowest part of the property, well away from the buildings, and consists of settling tanks, sprinkling filter, sludge bed, and sand filter beds. The

equipped x-ray and dark room are located in the infirmary. In the administration building are a waiting room, examination room, throat and dental room, pharmacy, the offices of the physician in charge and the associate physician, business office, post office, library, and recreation rooms.

Some of the plumbing fixtures are of special design, notably the lavatory faucets (Fig. 18) and bath spray apparatus (Fig. 19). Credit should be given to the plumber, L. D. Hosford, and the manufacturers, the Meyer-Sniffen Company, who collaborated with the architect in the design and production of these devices.

An item of interest in the administration of the sanatorium is the fact that two automobiles are maintained for passenger service between Mt. McGregor and the railway station nine miles away; also a light autotruck for express and farm supplies service. During the heavy snows of winter the automobiles are laid up and

effluent is treated finally with chlorine before it escapes into the neighboring stream.

Current for light and power is obtained from the transformer station of the electric railroad at Wilton, one and a half miles away, and is stepped down from 4,400 volts to 220 volts, 3-phase, 40-cycle, at the farm buildings and sanatorium.

Hot water heating is used throughout the buildings, the hot water being pumped from the central plant through pipe tunnels and trenches. The boilers also generate high-pressure steam for sterilizing and for use in the laundry and kitchen, and for steam tables in various serving rooms. The chimney is built of solid concrete blocks, reinforced horizontally and vertically with steel bars. It is 5 feet inside diameter and extends 175 feet above the boiler room floor.

A small laboratory is located in the infirmary and another in the rest house. A large laboratory for research work is a hope of the future. A surgical dressing room and a completely

horse-drawn sleighs are substituted.

The farm is located in the valley at Wilton, New York, two miles from the sanatorium, and comprises 343½ acres of tillable land, including a wooded stream. The present buildings consist of

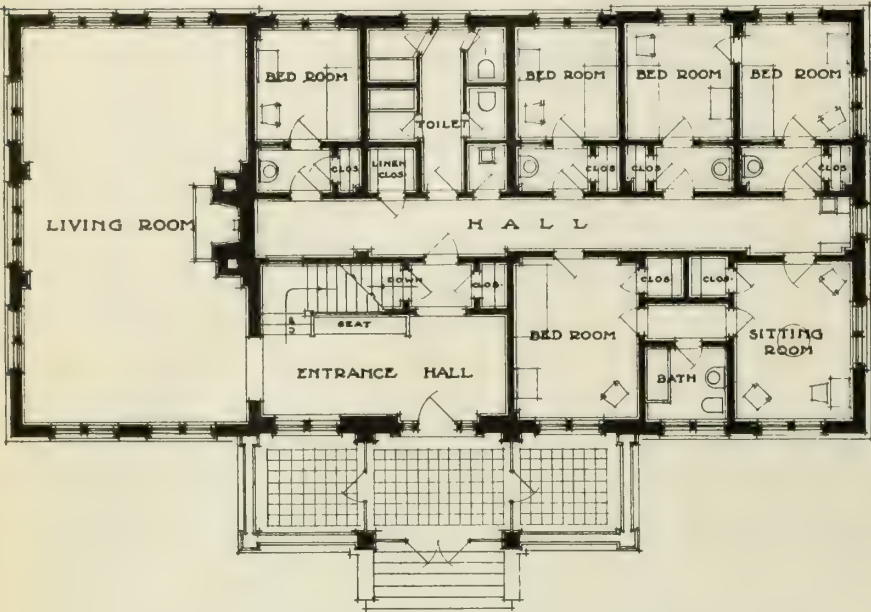


Fig. 16. Sanatorium of the Metropolitan Life Insurance Company. Nurses' cottage. First floor plan.

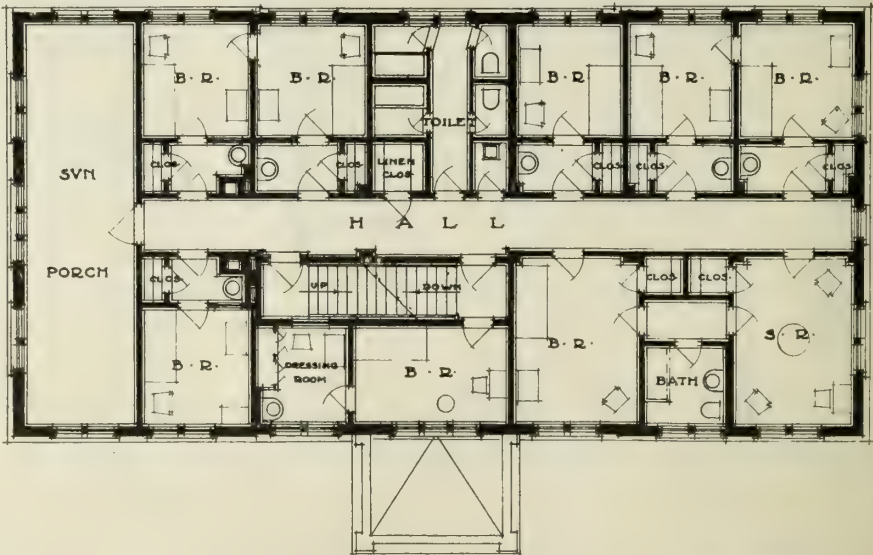


Fig. 17. Sanatorium of the Metropolitan Life Insurance Company. Nurses' cottage. Second floor plan.

the main barn and head farmer's cottage. The main barn has space for cows and horses, besides bull and calf pens. The building contains hay room, office, dairy, tool room, wagon room, ice

house, dormitory for employees above dairy, and store rooms, vegetable cellar, coal vaults, heating and power plant, pressure tanks and pump, and



Fig. 18. Sanatorium of the Metropolitan Life Insurance Company. Lavatory specially designed by the architect and used throughout the sanatorium at Mt. McGregor. The water is supplied in a gentle rain shower, so that bathing will be done in running water. The bowl has no stopper, and no overflow with concealed spaces difficult to clean.

silos. When the extension of the main barn is completed, it will contain space for eighty-four cows, and a wing, symmetrical with the present



Fig. 19. Sanatorium of the Metropolitan Life Insurance Company. The special feature of the shower bath is the supply of the water at an angle, falling at the feet of the person standing near the control valves at the opposite end of the tub. The temperature of the water is easily regulated before it strikes the bather, and, as it is delivered at an angle, one's head may be kept dry when so desired. The water pipe leading to the shower head serves as a curtain rod.

dairy wing, will contain a wagon shed and garage. The water supply is from two driven wells 145 feet 6 inches deep, and is pumped into underground tanks and distributed by pressure. The farm furnishes the milk and vegetable supply for the sanatorium and also feed for the cattle.

There are now over fifty Ayrshire cows in the cow barn, which produce the milk and cream used at the sanatorium. Calves are being raised to increase the herd as needed. Six horses are housed in the horse barn to carry on the farm work and haul supplies to the sanatorium. A drove of fifty Berkshire pigs provides pork for use in the sanatorium. Poultry houses are a possible future addition to the farm equipment. Pigs are profitable, as they are fed mainly on sterilized garbage from the sanatorium.

It is of interest to visitors to know that the cottage where General Grant died, with 50 feet of grounds on each side, is owned by a memorial association, and stands in the midst of the sanatorium property. The Metropolitan Life Insurance Company has erected on the brink of the cliff where General Grant had his last view of the valley, July 20, 1885, three days before his death, a memorial consisting of a marble slab, suitably inscribed and enclosed with an iron guard.

ANOTHER HOSPITAL AFFECTED BY POLITICS

Governor of Louisiana Removes Efficient Superintendent of Charity Hospital

Recently Governor Pleasant, of the state of Louisiana, removed four of the seven members of the board of trustees of the New Orleans Charity Hospital and appointed four new members, who, a few days after their appointment, visited the hospital, spending about half an hour there. On August 19, two weeks after the appointment of the new members, the governor called the board together, and, acting as chairman, dismissed Dr. Charles D. Wilkins, superintendent for the past three years, and had Dr. S. W. Stafford, a New Orleans surgeon, appointed in his place. One of the new trustees, a Mr. C. A. Tessier, a real estate dealer, explained his vote by saying, "Well, my conscience is clear; I believe that Dr. Stafford will make a good superintendent; in fact, I believe that any manager of a hotel could run the Charity Hospital."

Dr. Stafford, who was on his vacation at the time, was to be represented in the hospital by Dr. B. F. Gallant, who has been Dr. Wilkins' assistant. It is said that the new management intends to do its best to maintain the system inaugurated by Dr. Wilkins, and it is also said that there were no complaints of any kind about Dr. Wilkins' management and that the change was made largely for political reasons.

At a meeting to be held at Liberty, Mo., in October, the Missouri Baptist General Association will consider a proposition to establish a tuberculosis sanatorium near Springfield. The association now has three hospitals under its direct supervision or recognition—namely, the St. Louis Baptist Hospital, the Missouri Baptist Sanitarium, and the Mayfield Memorial Hospital, all of St. Louis.

THE OWNER, THE ARCHITECT, AND THE ENGINEER

Relations That Should Exist Between the Parties Interested in a New Building—Some "Secrets of the Trades" That Should Be Known to Hospital Trustees and Administrators

By OTTO E. GOLDSCHMIDT, CONSULTING ENGINEER, NEW YORK

IN former years, when our wants were small, it was a simple matter to build a house. A man thus disposed would look about in his particular community and engage a reliable carpenter, to whom he would express verbally his simple plan of the house he wished to construct, and the carpenter would develop this mental plan a little further in his own mind, or perhaps even draw a little sketch of what he thought was wanted, and proceed to construct his building. In those days the architect was unknown.

As time went on and the demands and the wealth of the community increased, the man who wished to build a larger building to meet his demands found that it was to his advantage to employ a man who was specially trained and familiar, not only with carpentry, but also with mason work, plastering, hardware, etc., and who had some knowledge of plans and of costs. In those days the contractor was both builder and architect.

Under this procedure the owner soon found that the builder or contractor did not always fulfill his promises—that work did not always stand up as it should, it would show defects and omissions, extra charges came up which should have been foreseen and avoided, and which were excessive and difficult to check; all of which not only brought about endless disputes and unpleasant relations, but, worst of all, unsatisfactory results in the building which must serve the purpose for which it was built for many years. All of these troubles were caused by bad planning, a lack of proper study, improper supervision, etc. Furthermore, under this system the artistic side, to say nothing of the most economical construction, was entirely overlooked, and the results spoke for themselves. Actual competition under this system was out of the question.

On the next development the owner finds that it is to his advantage to engage a man, called the architect, to develop his mental picture of the building under consideration, and amplify it and present it in the form of carefully studied plans, in which changes and alterations can be made without cost, and all details can be carefully developed and studied before the work is executed. These plans, together with the specifications, can then be given out to various builders for estimates and actual competition can be obtained, as all

builders are estimating on the same construction. There is no opportunity for excessive profits to the builder, and, with the regular and honest supervision on the part of the architect or his superintendent, the work is executed in a dependable and businesslike manner as provided by the plans and specifications. The owner is relieved of the responsibility of an immense amount of details, and gets the results which he wished to obtain at a lower cost than could be produced in the old-fashioned manner. The contractor has made a reasonable profit and is content, and is pleased to have satisfied both owner and architect.

With the tremendous progress of the age, our buildings have grown from the modest homes, institutions, or business buildings, one or two stories in height and covering only small ground areas, to the gigantic office and hotel buildings from twenty to fifty stories high, to hospitals and similar public institutions housing thousands, and to industrial plants employing vast numbers of men and women. The development and construction of these vast enterprises is entirely due to the tremendous progress of the engineering sciences.

The demand for the tall building was met by the structural engineer by an entire revolution in the art of building construction, together with development of the present elevator. But, in all of our modern buildings of whatsoever nature, the engineer becomes more prominent every day, for it is through the development of our modern systems of heating and ventilating, of electric lighting and power distribution, and the systems of water supply, plumbing, and drainage, that the comforts demanded above all things are supplied. Without these comforts our modern buildings would be impossible.

Our modern buildings, therefore, are far different from the simple cottage or home which required only a single trade—the carpenter—to construct, but instead require the employment of a vast number of different trades and, in addition, the sciences of architecture, of structural, mechanical, electrical, and sanitary engineering.

Naturally the vast expansion of the building requirements have greatly increased the demands on the architect, and, in place of a single man now being able to handle the problems which arise during the planning and construction of the building, the architect must have an experienced and highly

trained organization, each member of which has specialized in the various lines, such as architectural design, building construction, foundation and structural engineering, heating and ventilating, electrical engineering and sanitary engineering.

The contractor also expands, and now becomes the general contractor, with many subcontractors under him, who handle the work of the different trades, including those of an engineering character.

In the business arrangement for the construction of one of these large building projects, the relations of the owner, the architect, and the contractor remain as before, but a new factor enters here in the form of the engineer, or engineers, to assist the architect in these specialized branches. That such engineering services are essential is readily admitted by anyone who has had any experience in the building lines, but how they should be best obtained and arranged for is a question which has already gone through a considerable transition, and unfortunately has as yet not entirely become a fixed practice. Many men trained both scientifically and practically in their particular engineering branches have entered this field and devote themselves exclusively to the consulting work.

Just as in those days before the architect had come into his own, when an owner would ask a contractor about the advisability of employing an architect, he would receive the information that an architect was a useless ornamentation and of no practical value, and, further, would only cost him (the owner) money; that he, the contractor, would take care of all the plans and such work as the architect usually provided, at no cost to the owner. We all know what was the lamentable result of such arrangements.

Today we have in many instances practically the same thing, except that the architect now steps in between the owner and the contractor. The proceeding is something like this: The owner makes a contract with the architect to furnish all plans and specifications, and to supervise the building under consideration. This includes all engineering services of whatsoever work may be involved, and is based on the usual architectural fee for compensation. The architect starts his working plans, and, as formerly was done by the owner, so now the architect calls on one *contractor* in each of the structural, heating and ventilating, electrical, and sanitary lines to assist him to prepare *his* plans and specifications. These contractors, eager for the advantage for obtaining contracts in their lines given them by such an opportunity, usually prepare these plans and speci-

cations without cost to the architect in dollars and cents. In most cases, however, the plans and specifications prepared under this arrangement are not only hastily prepared without proper study, but, far more important, they are prepared so that, while to the uninitiated, which frequently includes the architect, they appear perfectly fair and open, actually they are arranged so as to give the contractor who prepared them a decided advantage over his competitors, who naturally are forced to figure on these specifications and dare not criticise them to the owner or architect for fear of injuring his standing. In most cases the contractor who prepared the plans and specifications obtains the contract for this work—sometimes because his estimate is below those of his competitors, sometimes because the architect will offer the work to him at the figure of the lowest competitor, and sometimes because the architect will even induce the owner to award the work to him at a price above the lowest estimate received on account of special recommendation by the architect. In almost every case he is sure to get the contract, and, when it has been awarded to him, let us see what becomes of the position of the architect.

1. If the contractor had to cut his price, and naturally he had to figure the cost of preparing the plans and specifications as a part of the cost of the job, the architect still feels under obligations to him for rendering him this service, and the contractor will readily take advantage of this situation if he finds any evidence of it.

2. The architect, not being able himself to prepare the specifications and plans, while able to interpret them in a general way, cannot be expected to interpret the technical details and requirements, and must therefore depend on the contractor for such interpretation. Such interpretation would naturally be biased, and, in short, the contractor is in a position to interpret his own specifications. Omissions, reductions in weight, and the cheapening of the quality of material can readily be accomplished as long as the installation in itself is one that will operate or stand up. Of these changes the architect will have no knowledge.

3. If changes or additions to the original work come about, the architect has no one in an unbiased position on whom he can depend to check the estimated charges for such changes or additions.

4. Where a mechanical plant of some considerable size is required, including boilers, stokers, engines, electric generators, hot water heaters, refrigerating machinery, and the many electrical devices, as is the case in our modern hospitals,

hotels, and large office buildings, the architect, who can be expected to have only a general knowledge of such equipment, would be completely lost unless he had someone with whom to consult who is thoroughly familiar with this form of apparatus, without having a direct monetary interest in the recommendations he makes therefor. The owner can always buy such apparatus direct from the manufacturer at the same price as it would be sold to the contractor. If purchased, therefore, through the contractor, he must expect to pay a profit of from 5 to 15 percent to the contractor for handling this equipment, though the owner gains nothing thereby, and all that is demanded of the contractor is that he transfer this part of his contract to the particular manufacturer. He may, however, go even further and "shop" this equipment, and purchase it of a make or type which is inferior in quality and less in cost, but to the architect would seem the same or equal to that specified and originally figured in the estimates.

On this basis, in every case, though he may not realize it, it is the owner who pays the bill, and, while he thinks he is paying only his 5 or 6 percent for architectural and engineering fees, he is really paying a considerable additional sum for engineering services without getting the results to which he is entitled for the money so spent. The architect is not only saving for his own pocket the fee which would have been demanded by a reputable consulting engineer, but clearly has transferred such charges in a manner not discernible to the owner who pays the bills.

A concrete example of this method of operating was experienced by the writer a short time ago, which will serve to demonstrate the methods in use. This architect, having experienced some of the depression in the architectural business of recent times, concluded that on a certain job of moderate size he would dispense with the services of a consulting engineer and therefore made the usual arrangement with a firm of contracting engineers to prepare the plans and specifications for a certain part of the work, instructing them generally as to the character of the work wanted. The architect had had many years of business relations with this firm of contractors and had given them previous to this time a very considerable amount of work, and he had therefore the fullest confidence in them. The contractors were one of the largest and most prominent in their particular line, and had executed some of the largest contracts in this country. The plans and specifications were duly issued for competitive figures. One of the contractors who received the specifications had shortly before this time ex-

ecuted a similar piece of work, which had greatly pleased the architect, and had brought forth special commendation, and had been informed by him that a similar job was wanted. Much to the amazement of this contractor, he found the specifications issued entirely contrary to this statement. He therefore took it on himself, based on the architect's remark, to send in an alternate estimate based on the character of the work as previously executed on the particular job referred to by the architect. When the bids were received they all ran between \$7,500 and \$8,000, except the alternate, which amounted to \$5,500. Fortunately for the architect, the owner did not get to see these figures. The contractor who had prepared the specifications was called in and at once instructed to modify his specifications, which he agreed to do, and they were again sent out for revised estimates. The figures returned were only slightly below those first submitted. The architect, thereupon realizing the position in which he was placing himself before the owner, called in the writer to go over the plans and specifications as prepared and to revise them according to good practice. It was found that the specifications had been what is commonly called "loaded"—that materials were specified that were ridiculous for the class of service, but very high in price, and would never have been installed by the contractor who prepared the specifications, for substitutions would have been absolutely necessary. It was found that certain specialties were called for, but that the data supplied was so meager that the one manufacturer specified was the only one in possession of the necessary conditions on which to quote, and his price, of course, was very high, to say the least. Other material was so specified as to absolutely eliminate the possibility of competitive prices, and the manufacturers specified were not slow to see their opportunity. The writer modified the specifications and plans according to good practice, and actually added to the equipment so far as results obtained by the owner, and the job was let for a little over \$5,000—a difference of \$2,500 to \$3,000 for engineering services, to be paid for by the owner, without his knowledge of course, but still paid for by him, when it should not have cost him one-tenth of that amount in the regular way, and, as the architect had agreed to furnish these services, it should not have cost him anything, which was finally the case.

The writer does not claim that all work handled in this manner as between architect and contractor is proportionately as expensive to the owner, but does claim that it is fundamentally a bad business arrangement which invites such practice, and

cannot be expected to give satisfactory results to any of those concerned.

The architect cannot always be held responsible for resorting to this method, as the many changes in construction of buildings in our modern times have placed more and more responsibilities on his shoulders, and made greater demands of him daily without any material compensating effect in increased fees. In many instances he is, therefore, forced by the owner to resort to these means.

Many of the most prominent and reputable architects have recognized the fallacy of this method, and regularly employ consulting engineers for the various lines. Only a few of the largest firms are able to maintain a competent staff of engineers regularly on their force. Unfortunately some architects claim to have such a staff only to deceive the owner, and actually are dependent on the contractor for their information, or their staff in these lines is so lamentably weak that little can be expected of them.

It seems very evident that the average architect cannot afford to maintain a staff of competent engineers to handle the work of this character which comes to his office for the reason that this class of work should be done only by men who have specialized in their particular lines, and have had such technical training and practical experience that they command salaries which the average architect cannot afford to pay.

It would seem, therefore, that the consulting engineer independently established, just as the architect did many years ago, must become a part of all building operations of any size, and this transition is now under way. It would seem, however, that no owner who is arranging a contract for a building operation of any size with an architect should authorize such an arrangement or sign such a contract without having definite knowledge of how and by whom the engineering features of his project are to be handled.

Generally, it is preferable that the consulting engineers work under the direction of the architect, so as to have no division in the responsibility of the head and absolute unity of action, but frequently the owner reserves the right to select such consultants or pass on their acceptability.

As to the fees to be paid for such services, it is generally considered, and properly so, that where a building operation involves a considerable amount of engineering, the owner pay in addition to the now generally established architectural fee an additional fee to cover this engineering expense. Where architects are forced to a certain amount of competition, this is frequently lost sight of, and then the various means already

described are resorted to, or incompetent and inexperienced engineers are employed, with the usual lamentable results for which the owner has to pay in the form of extras, changes, or in coal, electric current, and water bills for many years to come.

It is, therefore, equally important to know that your engineering work is in competent hands as it is to know that your architect is competent, and the same qualities of ability, honesty, and integrity must be sought for in the engineer that have been sought for in the architect. Without these, no confidence can be established, and without confidence no man can do his best work for his client.

Liability for Injury to a Patient

The California Supreme Court has affirmed a judgment against the McNutt Hospital, of San Francisco, for \$750 in favor of a patient and her husband on account of her being burned on the legs by a hot water bottle while she was unconscious from the effects of an anesthetic administered to her before a surgical operation was performed upon her at the hospital. Finding that the evidence warranted a conclusion that the burns were sustained while the patient was under the exclusive charge of the hospital nurses, the Supreme Court said:

"Under its contract with her, the defendant corporation owed her a duty of protection which was violated by the use of an instrumentality which produced the painful results which were made manifest when she came out from the influence of the anesthetic. Proof of the accident carried with it the presumption of negligence. * * * And this is the rule, whether the liability be ascribed to the carelessness of experienced nurses or to the defendant's negligence in selecting nurses who were not competent. That is the true rule as announced in *Adams vs. University Hospital*, 122 Mo. App. 675, 99 S. W. 453, a case very like this one."

The Decision in Regard to Corn Syrup

The Illinois State Food Standard Commission, at a hearing held June 21 to 23, declared that corn syrup is a wholesome and nutritious food, equal in some instances to cane or beet sugar. There has always been prejudice against corn syrup, and this decision, made after the hearing of testimony of scientists and people with authority, may help to overcome this feeling. The manufacturer, of course, will be most pleased by this ruling, but if a wholesome, but less expensive, material can be made to take the place of a more expensive one, the consumer should also be glad.

This means the use of corn syrup is desirable in some instances, but not all. Our fear is that advantage may be taken of the facts granted, and if it becomes no longer necessary to state on the label that corn syrup is used for sweetening purposes, we may have to pay the higher price for the cheaper product.

From the beginning of the war up to July 1, 1916, the American Red Cross donated supplies to the warring countries to the value of \$1,312,754.23. In these the allied powers shared to the extent of \$1,002,021.87, nearly half being purchased with designated funds, and the central powers to the extent of \$310,732.36, about two-thirds being designated. In addition, nearly \$18,000 worth of supplies were sent to other countries during the period mentioned. These include Armenia, Haiti, Mesopotamia, Mexico, Poland, and Syria.

THE NEW BETHANY HOSPITAL, KANSAS CITY, KANSAS

A Block Type Institution Designed For Future Extension, For Economical Administration, and For Convenient Care of Patients

By J. McLEAN MOULDER, M. D., SUPERINTENDENT

THE site of the institution consists of a five-acre tract of land, located at Twelfth street and Reynolds avenue, on the highest elevation in Kansas City, Kan. The building fronts south, facing Bethany City Park, containing eleven acres; thus the hospital building is surrounded by an area of sixteen acres, undulating from the high point of the hospital to the level of Central avenue. The natural grade of the ground is admirably adapted to the basement entrance on the east, and also affords easy access to the emergency or ambulance entrance between the main building and the annex, and is thus protected from the north winds and sheltered by the overhead connecting corridor.

The present building is "T" shape and is 156 feet long, the extension in the rear being 80

construction throughout. The walls are of brick, dampproofed and faced with brick and terra cotta. The main entrance on the south is sufficiently accented, and the main lobby and reception room are lined with marble and floored in mosaic tile.

The first floor of the main building contains the administrative offices, x-ray and laboratory departments, chapel, library, and sleeping quarters for interns.

The second floor comprises the surgical and

medical wards for men and women, the separate wards having toilet conveniences. There are also fourteen private rooms, one suite with reception room and bath, two large sun parlors, the diet kitchen, three general toilets, and well-considered service rooms,



Fig. 1.



Fig. 2.

feet and containing the fuel, boiler, and machinery rooms, laundry, and nurses' quarters. It is six stories in height and of fireproof



Fig. 4.



Fig. 3.

closets, etc. All service rooms are supplied with hot air for warming utensils, independent of the general ventilating system.

The third floor consists of one suite, with reception room and bath; three private rooms, each with bath; one four-bed room, with bath; five three-bed rooms, ten private rooms, diet kitchen, three general toilets, and all necessary accessories.

The fourth floor is a duplicate of the third. The fifth floor provides for the surgical and obstetrical departments.

The surgical department consists of five operating rooms (the laboratory and recovery rooms having been converted to that use), one sterilizing and one anesthetizing room, nurses' work room and dressing room, also doctors' scrub-up and dressing rooms, which have metal lockers and showers and toilets.

The operating rooms have mosaic tile floors and are lined with vitrolite 6 feet high, the walls and ceilings being tinted and enameled.

As the roof is a roof garden, the vent flues are carried 15 feet above the roof line to insure fresh air at

dining rooms, sewing room, drug supply room, main linen room, and rooms for storage, hydrotherapy, etc. The main kitchen is directly connected with each diet kitchen, and the roof by means of automatic push button dumbwaiters of the call and send type.

The basement of the annex or rear portion of the building contains the vacuum cleaning machinery, water filters, electric switch board, steam boilers, and fuel rooms, and the subbasement of the main building affords ample room for the refrigerating machinery, plenum chambers, fan rooms, ventilating ducts, and apparatus for propelling low-temperature air to all rooms utilized for fever patients. The facilities of this hospital are exceptional in that the ventilating arrangement admits of using any bed room desired as a fever room.

The refrigerating plant is ample to supply ice for packs, ice cream freezers, etc. All water used

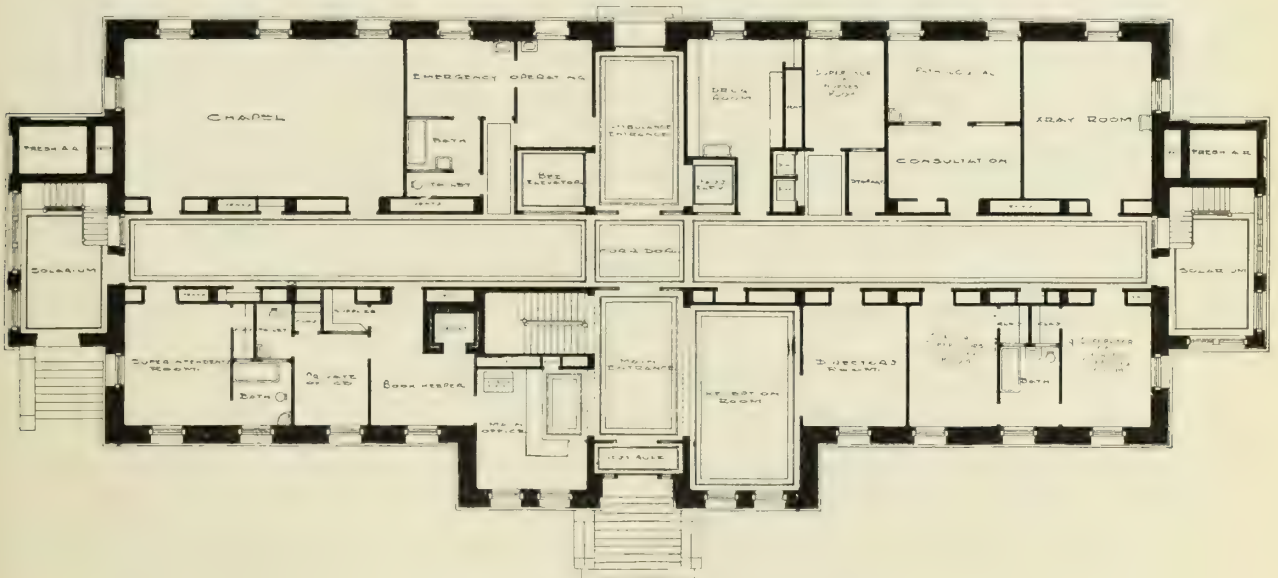
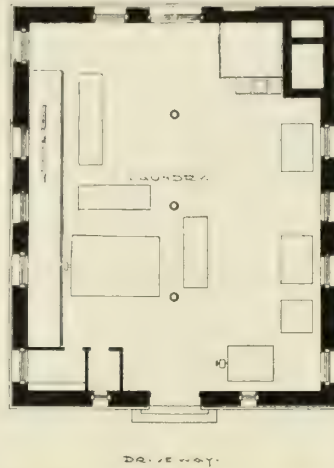


Fig. 5. Bethany Hospital. First floor plan.

the breathing line. All skylights, ventilators, down spouts, flashing and counter flashing are made of heavy copper.

At the ground floor or basement grade entrance all supplies are received, weighed, checked, and delivered. All store rooms for vegetables and groceries are located convenient to the main kitchen, with due regard for sunlight and ventilation. The main kitchen and diet kitchen are ample and complete in equipment and arrangement, and are ventilated by a separate exhaust system. The ground floor contains also the doctors' and nurses'

in the building is double filtered, and all drinking water runs in circuit and is mechanically cooled. The laundry is equipped with metal washing machines having direct connected motors, insulated to eliminate vibrations occasioned by overhead or shaft-driven machinery. The freight and passenger elevators are of the automatic push-button type, with fuel control and the most modern safety and locking devices. The elevator cars and inclosures were especially designed for this building, omitting all grill and panel work, with plain metal doors filled with polished plate wire-glass.

The ventilating system is doubtless more perfect, complete, and versatile, yet simple and efficient, than that in any other modern hospital of which we know. With great care and calculation, velocity and resistance have been considered with regard to the size of the flues, which are built of glazed terracotta tile, and there is an assured and specific result in every revolution of the blowers. The registers are of the Louvre type, the grill being hinged to open for cleaning. All plumbing pipes are genuine wrought-iron, and are run and concealed in a way that admits of removing all the fixtures on any one floor without in any manner interfering with the operation of the fixtures on any other.

The architects have successfully worked out a great many new fea-

adapted to hospital needs. All double and single-acting floor hinges are of the checking type. All windows are glazed with plate glass.

The building and its appurtenances, equipment, apparatus, machinery, and heating and ventilating plant, exclusive of the site and furnishings, cost \$250,000. The nominal capacity of the hospital is 150 beds, which can be increased to 200 for emergencies, so that the cost of the building per bed is \$1,666.00. The firm of Rose & Peterson, composed of William W. Rose and David B. Peterson, of Kansas City, Kan., were the architects of the building.

In this brief way we describe what may be considered one of the very best hospital buildings which we have inspected. The building is, indeed, an excellent one in every

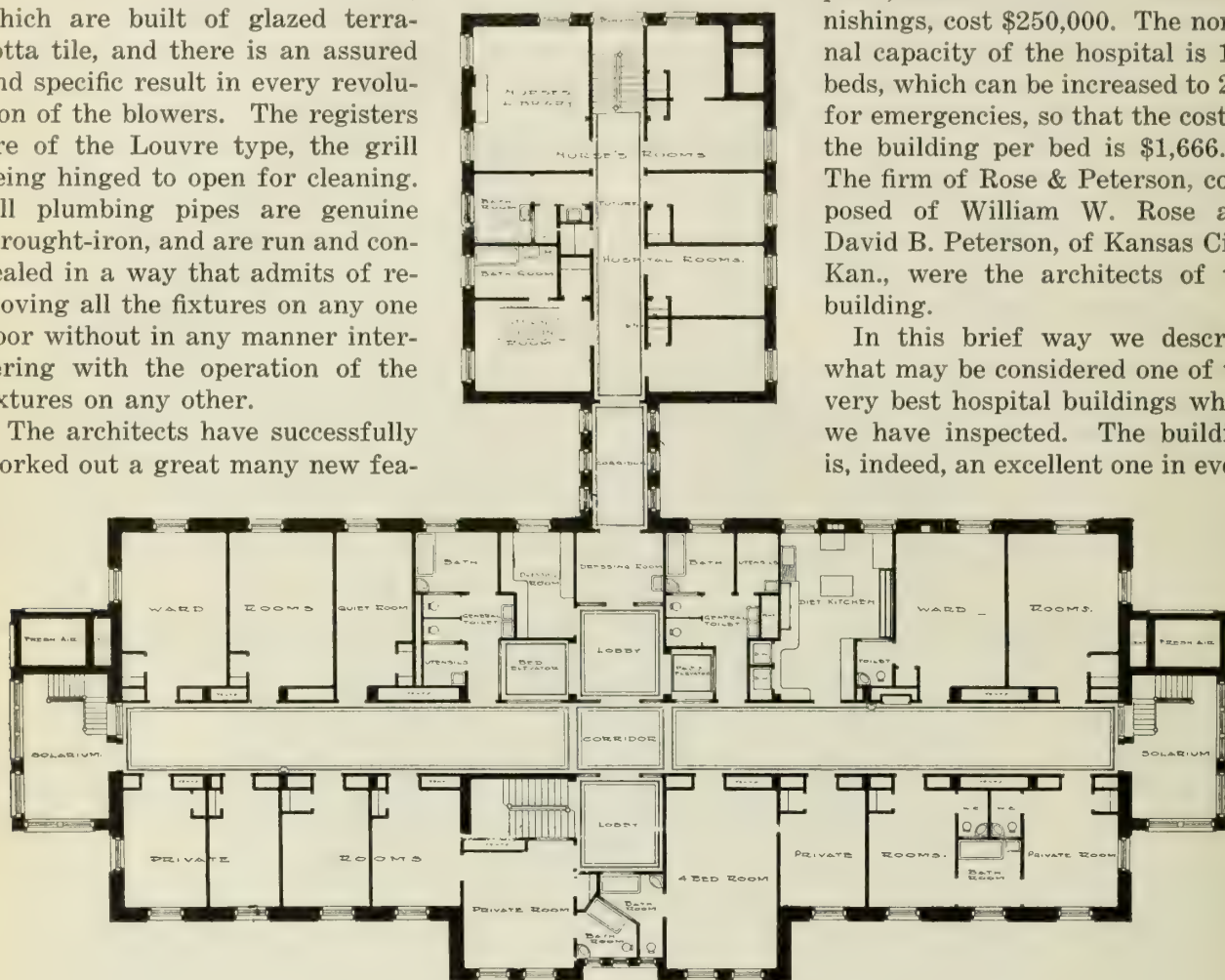


Fig. 6. Bethany Hospital. Typical second, third, and fourth floor plans.

tures that are strictly applicable to hospital construction in this building, which must be seen and examined to be fully appreciated. The signal system, for instance, which is of the silent kind, has a very small bell on the nurses' desk for night use; this bell strikes once only when the signal flashes, and this same kind of bell is used also in the main office to notify the operator when a signal has been given.

All wood work in the building is of quarter-sawn white oak, worked out with painstaking detail to avoid dust catchers. All door jambs are set one inch above the finished floor line, and the composition floor is carried up to the jamb, following the contour of the round corner rebate, specially made coved tile being utilized on tile floors to fit the jamb and casing. All hardware is plain, and locked and keyed in a way peculiarly

respect and reflects great credit on the owners and architects.

Cleaning Silver by Contact with Aluminum in Alkaline Solution

The problem of cleaning silver involves the removal of the tarnish of silver sulphide by some method which will restore the polish to the surface of the metal. Briefly, the chemistry of the electrolytic process may be explained as follows: aluminum is electrolytically more active than silver, or, chemically speaking, it is said to be electropositive referred to silver. In the presence of an electrolyte like sodium carbonate or sodium chloride, or a mixture of both, aluminum forms aluminum ions in the solution and itself becomes negatively charged. The silver accordingly becomes positively charged as the current flows from the aluminum to the silver through the solution.

Dr. W. S. Moore and Dr. Draney, of Grangeville, Idaho, have purchased a hospital at Sand Point, in the same state.

THE SMALL COMMUNITY HOSPITAL—CONSTRUCTING THE BUILDING¹**Materials—Foundation and Basement—Walls—Partitions—Roof—Floors—Ornamentation—Elevators—Refrigeration—Vacuum Cleaning—General Principles**

By JOHN ALLAN HORNSBY, M. D., CHICAGO

PAPER IV

WHEN we are called on to write on the subject of the construction of the small community hospital, especially so when a whole type is under consideration, we are confronted with the difficulty of varying conditions in different communities. This is especially so inasmuch as there is a marked dissimilarity in the materials available and the quality and quantity of the labor to be employed. When we think of building a small community hospital, and are advising as to how it should be built and of what materials, we are compelled once again to think of the story of the old negro who was returning from a duck-shooting expedition with his old bored-out muzzle-loading musket on his shoulder, and bending under the weight of great strings of fine ducks. He was met by a city hunter who had also been tramping the marshes in his fancy shooting coat, with magnificent fowling piece, and arrayed like Solomon in all his glory, but bearing as his burden only the few decoys with which he had started out. "Uncle, how did you get all those ducks; did you shoot them on the wing?" the city man asked. "On de wing, on de haid, on de tail—anyway, jest so I git 'em," was the reply.

And so it is with the building of a small community hospital. If there are sufficient funds available to build the institution as it ought to be built, and out of the best possible materials, from a design made by an experienced and well-equipped architect in this class of buildings, so much the better; but the main point is that every community of 2,000 or 3,000 people or more that is thoroughly imbued with the spirit of American independence and self-respect, and is self-supporting, ought to and can have a community hospital—if for no other reason, as we have stated so often, than that the local medical profession shall have a workshop in which to prepare themselves with the requisite skill and experience to enable them to care for the community sick in time of need; and, even though the hospital should not take care of one single sick person to whom the community was obligated, the hospital, for the former reason, ought and would still be one of the best assets of the community.

We have discussed elsewhere the possibilities of remodeling at a small cost the abandoned resi-

dence or factory building or school house to supply temporarily the needs of the people with hospital facilities, and we will therefore not consider this phase of the question at this time.

Let us now think of a small new hospital—say, 25 beds—for which there are available funds, the amount of these depending on the extent and accommodation for the hospital to be erected, and for any future additions which might be added. Unfortunately, in considering the erection of a small community hospital, too often a committee is sent out to investigate hospitals, and the committee returns filled with the wonderful things it has seen in hospitals which are models in their own ways, but which have all the elements of extravagance without serving their purpose to any better advantage than the character of hospital we are discussing in this paper.

Under ordinary conditions where the demands are not for large specialized departments, this especially so in the administrative department, a 25-bed hospital, constructed as will be described, would not cost to exceed \$25,000 to \$30,000 where the proportion of wards and private rooms is in accordance with the modern needs. The addition of specialized departments and many private bath rooms and luxurious trimmings of one kind or another would necessarily make such hospitals cost infinitely more.

In the hospital described in this paper we are considering the bare needs of a first-class institution. Necessarily, all ornamentation and decoration must be eliminated, and a building erected in which we can install all the necessary facilities with which to care for the sick in line with modern medical demands.

THE FOUNDATION AND BASEMENT.—There is nothing better and nothing cheaper for the basement and foundation of such a building than concrete; it is serviceable, durable, looks well, and wears as well after many years as when it is first put in. This applies also to the basement floor of such a building.

Due to the unprecedented rise in the cost of some of the necessary products which are used in fireproof buildings, newer and cheaper methods have come into vogue, and after a careful investigation we think that the so-called reinforced skeleton construction, where all supporting members of the building and all floors of the building

¹This is the fourth in a series of six papers on Creating, Organizing, and Managing a Small Community Hospital. Next month the organization will be discussed, administrative and medical.

are built of concrete with deformed steel rods, properly designed for the respective loadings, has the preference.

For the purpose of this paper we will call this the structure which in any case would be practically of uniform design for all such buildings, and, for the further purpose of the discussion, we will call all other portions of the building the externalization, by which is meant that portion of the building which incloses the structure.

THE WALLS.—There are several methods in which such an exterior could be constructed. First, these curtain walls, as they are called, can be made wholly of the hard-burned hollow clay tile. This can be obtained with glazed exterior surface, and, when stone is used in conjunction with this material, it can be left in the form in which it is laid, and makes a very beautiful and slightly wall, which can be plastered directly on the inside of the tile.

A second method is to make the entire exterior wall of a brick veneer, backed up with hollow tile of the same character of 8-inch thickness, making in all a 12-inch wall, the plaster being placed on the interior of the building directly upon the tile as in the first instance. Or, the entire wall can be made of a so-called 12-inch solid brick, in which case a 4-inch hollow brick should be used for the inside course, which will also directly receive the plaster.

The matter of ornamentation is one which necessarily must be left to the amount of funds available and to the architect's and committee's wishes in this matter. Stone, terra-cotta, and even cement may be used for such ornamentation. Cornices and ornamental courses can be cheapened considerably by using galvanized iron, but, if it is used, it will require the same care that wood would exact for the same purpose—i. e., frequent painting.

Another method of treating the building would be to make the curtain walls entirely of hard burned tile, putting a stucco exterior directly on these tile. There are other methods of building by using the interior structure of reinforced concrete, and making the exterior walls entirely of masonry, but this means a somewhat larger building, due to the increased thickness of walls in the lower stories.

In keeping with the fireproof character of structure, the floors should be made of concrete joist construction in which hollow tile are laid on wood staging, spaced 4 inches apart, and in these spaces are to be laid the necessary reinforcing steel and concrete poured into the spaces and over the top of the tile, the depth over the top of the tile to be at least 2 inches.

The roof of such a building can be made either with the same construction as the floors and furred up with cinders to obtain the proper pitch to the rainwater leaders, or else the upper floor can be placed in such manner that a slope is formed in the roof slab, and a suspended ceiling of expanded metal hung from this, on which the plaster is placed. If the money is not available for either one of these forms of construction, the ordinary joist construction can be used for ceiling and roof, and the roof covered with one of the so-called plastic roofings of pitch and felt, or asbestos and felt.

WINDOWS, FRAMES AND SASH.—Door frames and doors can be made of metal. While it is not so necessary to have the windows of metal—nor, for that matter, the doors—the frames for these doors should in all instances be of metal, inasmuch as they are much more rigid and serviceable than the wood frames, and will stand the strain of swinging doors without cracking the plaster, as is the case with wood frames and trim. The doors themselves can be of the flat slab type, and, if they must be fireproof, there are now in the market doors approved by the National Board of Fire Underwriters which are made entirely of wood, with asbestos layers under the veneers.

PARTITIONS.—The interior partitions can be made either of hard-burned hollow tile, gypsum, or metal studs, with plaster board. Any of these are acceptable. The laboratory of the National Board of Fire Underwriters had an exhaustive test made some two or three years ago, and found that steam or water played on the hot clay tile would break the tile and thus quickly make an opening into the next room, and the board found that gypsum blocks were to a very far greater extent fireproof than the tile, that steam or water played on the hot block would chip off an egg shell coat, and the continuous spray would keep on chipping off these infinitely thin scales until after a long time the gypsum block was worn down thin enough for the water pressure to break it through; but by this time it had served its purpose as a thorough fire retardant, and had permitted the fire to be extinguished.

The metal stud and plaster board partition has been found to be an exceedingly good fire-retardant of the same character as the gypsum block, but it is somewhat more expensive to erect than the gypsum block partition. Inasmuch as the entire structure would be of the reinforced concrete type as described, and there is no direct bearing load on any of these partitions, the lighter, more soundproof and more fire-retardant partition made of gypsum is probably more adaptable to this character of building. There is only one

objection to this class of partition—namely, that it will not bear the weight of wall plumbing fixtures, sterilizers, or heavy shelving as well as the hard-burned clay block, but this can be overcome by bolting through under the plaster with the proper hangers and bolts. Moreover, most plumbing wall fixtures are now made to have their entire weight rest on the plumbing stacks. One great advantage of the gypsum block is that it is made of the same material as the plaster placed upon it, and makes a homogeneous partition.

FLOORS.—Floors in hospitals may be put under three classifications: first, wood or parquet floors; second, mastic floors, in which are included all molded materials, such as terrazzo, magnesium chloride, and those made of plastic materials, such as asphalts and elaterites; third, prepared floorings, which are laid directly on the cement with plastic compounds, in which are included linoleum, cork tile, and the many forms of art tile. While marble floors might be considered under this heading, they are not adaptable to hospital purposes except for ornamentation.

The above are again subject to classification under each heading. Wood floors are almost obsolete in wards and patients' rooms, because, after they are dried out, large cracks open up which can easily harbor microorganisms and interfere with aseptic conditions in the hospital. Further, they require continual care. Of the second classification, one of the most satisfactory floors is the terrazzo floor, laid either directly on the rough floors or laid in cement in the hexagonal blocks of 12-inch dimension. The latter has the advantage over the former of being much more easily repaired, inasmuch as even the best terrazzo floors, with the settling and shrinkage which occurs in almost all buildings, will crack, and up to the present time there has been no method devised of repairing these monolithic floors without showing such patches. These terrazzo floors have the disadvantage of being hard and having no resiliency. Even with such floors installed, it is necessary, especially in the corridors, to put down continuous rubber matting or linoleum for the purpose of quietness and to prevent the ills due to continuous walking, such as nurses are called on to do, upon such hard surfaces.

In the judgment of the author there is no flooring within the financial reach of the average small hospital that compares to a good grade of battleship linoleum, properly seasoned before laying, and laid properly by people who make that a business. This linoleum comes in three forms of acceptable type—one is the uncolored terra-cotta; another is an olive green, which is made up with a coloring matter, and which will eventually fade;

and the third is the so-called marbled linoleum. This comes in $\frac{1}{8}$ -inch thickness, whereas the other two are $\frac{1}{4}$ -inch thick. The marbled linoleum is very pretty and desirable for private rooms and for wards when it can be afforded.

Most of the corridors in these small hospitals will be 6 or 7 feet wide. The ordinary battleship linoleum comes in 6-foot widths, and will just fit a 6-foot corridor. If the corridor is 7 feet, the turned cove base projecting 2 inches beyond the wall line, a 4-inch strip either of the same material, but of a different color from the cove base or another color linoleum, can be run along these 4 inches, and the 6-foot space filled with the terrazzo linoleum. Some hospitals use terrazzo cove base and the same material laid plastic for the floors.

In service rooms, store rooms, diet kitchens, and toilet rooms, terrazzo is admirable. The best floor under all circumstances is either the compressed cork in small squares or the so-called cork linoleum floors, either in the small squares or in figured form. These cork tile can be obtained in a great variety of colors and are practically indestructible. If perchance an accident should happen to some of these tiles, they are very readily removed and new ones put into their place. Under continuous wear for years, they practically show no variation in thickness. The objection to these floors is merely one of cost, inasmuch as in a hospital of the size and character under consideration such floors would cost practically 15 percent of the entire cost of the building. The so-called plastic floors made of elaterite have the one vital objection of being obtainable only in dark brown or light red and gradations of shades between these two. They are laid directly on the concrete slabs and are of $\frac{1}{8}$ -inch thickness, and are not only soft to the tread, but are thoroughly impervious and sanitary. They are not adaptable to main kitchens or laundries where considerable grease is liable to drop on them. Aside from their color, they are one of the most serviceable floors that can be obtained, and one great advantage in their favor is that they are exceedingly reasonable in cost. A comparative list of cost of the above floors is given herewith:

Wood floors, laid complete, cost about 15-16 cents per square foot. Parquet floors, depending on design, 30-50 cents per square foot, laid complete.

Second class.—Terrazzo floors of the monolithic type, without base, 20-25 cents per square foot. Terrazzo floors, block type, 25-30 cents per square foot.

Third class.—Cork tile, 50-60 cents per square foot. Cork linoleum type, 45-50 cents per square

foot. Battleship linoleum, $\frac{1}{4}$ inch thick, 20 cents per square foot. Battleship linoleum, $\frac{1}{8}$ inch thick, 18 cents per square foot. Mastic floors (elaterite), 15-18 cents per square foot.

Floors for operating rooms may be one of the softer materials, perfectly red in color, or of terrazzo, either plastic laid or in the slabs; or, for those who are still committed to the "all white," vitrified clay tile, 3 inches in diameter, hexagonal in shape, or 6 inches square. These tiles are white or light gray, and, though they darken with age, they are easily cleaned. All of these floors should be laid to a cove base. There are now on the market cove bases made of metal, which are less expensive than any other form of base. They can be placed complete in a hospital, so that the plaster of the wall and the floor line is complete with their upper and lower edges, making practically a continuous surface from floor to wall, at less cost than even an ordinary cement base. When painted a somewhat different color than the walls, even to simulate the color of the floor, they are not only sanitary, but very sightly. Necessarily the price of all floors would depend somewhat on the locality in which they are laid. It is obvious that a good floor must be laid by experienced men, and, if the small community is at a distance from a large city, the matter of expense of sending experienced men to do the work would necessarily add to the cost of all floors. The matter of wall covering, particularly that for toilet rooms, operating rooms, and working departments of this character, is one which must be treated from the point of view of the means at hand. A wall well plastered with hard finish, properly treated and enameled, will serve the same purpose as wood, expensive wainscots of glass or marble, or even tile. The latter are desirable to some extent, but do not serve their purpose any better than the former.

The decoration of the hospital is one which must be left entirely to the authorities of such institutions and the amount of money which they wish to spend. If the hospital is to be decorated immediately, it should be done with one of the so-called cement coatings, which can be applied in two coats to both the woodwork and the plastic walls. This material is not only sanitary, but is washable, and makes an admirable undercoating for any decorative scheme which it is decided to adopt at a later date. Until the hospital has thoroughly weathered and assumed its ultimate position in the matter of settlement, the most economical wall decoration should be used. At least one and preferably two winters should pass before the permanent decorations are put into the

building, so that the difference in temperature between the inside dry heat of the winter and the outside dampness of the open window period will have caused the final settling of all of the thousand component parts which go to make up the structure and which cause the small and often larger cracks in the building.

THE ELEVATOR.—As it is always a difficult thing to get patients up and down stairs, if it is possible to have a push-button electrically operated elevator, sufficiently large to contain a stretcher or cot, it will be a great convenience, and this elevator in such a case will run from the basement up to the second floor, which is usually the top of the house in a small hospital, and in that case the same elevator can be used for any purposes of transportation, especially to carry visitors and nurses and doctors up and down. There is a tendency too often to use this one elevator for conveying soiled laundry and garbage, and this custom is in violation of good hospital practice and ought not to be countenanced. An elevator will cost about \$3,000, but it will pay for itself in convenience in a short time. If the funds are not available for this class of elevator, one of the lever-type elevators, operated from the inside of the car, may be installed at less money.

Dumbwaiters may be simple or complex, but there certainly should be at least one in even the smallest hospital to convey foods, drugs, and other light articles up and down to save running the stairs. There are very good hand-operated dumbwaiters that have compensating devices to regulate the weights, and these do very well if properly installed by reliable manufacturers. Then there are the electrically operated dumbwaiters, with necessary safety devices to make accidents practically impossible. Where the hospital can afford it, these dumbwaiters are worth while, but they are necessarily expensive, comparatively, costing from \$1,000 to \$1,500, and require current for their operation.

VACUUM CLEANING.—As yet vacuum cleaning as a hospital routine is a mooted question. There is no possible doubt that the vacuum cleaner will keep the hospital far cleaner than it otherwise would be, because it will remove dust not only from the place where it has settled, but takes it out of the hospital entirely, so that the dust will not have to be chased from place to place, as it has to be with brushes and dusters; but it might be just as well understood first as last that a vacuum cleaner is not going to save the hospital any money, because every process of cleaning that is done by the vacuum cleaner must be done otherwise also, and it may also just as well be understood that the vacuum cleaner of today has its limitations. It will

not pick up mud from the floors and it will not take soot from the walls; however, the tools for vacuum cleaning have been greatly improved in recent years and will do things now that were impossible a few years ago. For instance, there is a tool to go into the radiators and suck dust out from the sections; there is another tool that can go into corners, both of floors and walls, and there is even a tool shod with a soft material that will permit the cleaning of furniture without scratching it. The main use of the vacuum cleaner in hospitals, however, is to clean the rugs on the floors and to clean the dust from the floors and walls and ceilings, and to pull the dust out of the mattresses and whatever upholstered furniture there is. One may install a vacuum cleaner for almost any price, from a few dollars up to thousands. The portable cleaners that are taken into rooms and wards are not desirable in hospitals; they make too much noise. In new hospitals vacuum cleaner pipes may be run up the pipe shafts along with other piping, with outlets on each floor. In hospitals already built the piping may be run up the elevator shaft and outlets drawn through the walls on each floor. This is a very good method in hospitals that are already built. This piping may be done by the average hospital engineer, and is not an intricate process. In a certain hospital, where there are three elevator shafts in different parts of the building, piping was run up each shaft and carried along the ceiling of the basement floor to a common point where a vacuum cleaning machine was installed. Manufacturers had asked from \$1,800 to \$3,000 to install a vacuum cleaning system. The piping was installed eventually by the hospital engineer at a total cost of approximately \$200, the machine cost \$300, making a total outlay of little more than \$500 for the complete equipment, and this was a hospital 300 feet long, of seven floors. A hospital that contemplates putting in a vacuum cleaning system should select very carefully, because there is a vast difference between the products of different manufacturers. Some of them are very much in advance of others.

Refrigeration in the small hospital has been recently standardized so as to eliminate what has heretofore been apparently insurmountable. There has always been a question as to the economy of refrigerating apparatus in the smaller institutions. It was a problem how the small institution could afford to operate a refrigerating plant. This point is now satisfactorily settled. The manufacturers of the carbon dioxide machines, using a circulating system of calcium chloride brine for cooling the boxes and making ice, have perfected small unit machines for in-

stallation and operation in very small institutions, and at prices that such institutions could afford to pay. The great advantage of refrigeration is the ease with which temperatures can be maintained evenly at all times without the necessary noise and muss accompanying the ordinary icing methods. Some quantities can be made readily for ice packs, and, when this ice is broken and put into cans and placed in the cooled chamber of the refrigerator in the diet kitchen, the ice will last practically indefinitely. One of the principal points to be taken into consideration in refrigeration is that it is a dry process, and, in consequence of this, quantity supplies can be purchased at wholesale rates and kept indefinitely, whereas with the moist system of melting ice to maintain temperature, in such boxes meats and vegetables spoil very quickly, due to the moisture which hastens decay. Further than this, lower temperature can be maintained with artificial refrigeration than can be with ice. An installation of this character should be so designed that the brine which is circulated to maintain the temperatures in the refrigerators, which circulation is done by a small pump in such manner that the compressor—or, in other words, the machine which makes the brine cold—should be operated only for the minimum length of time; and, if the installation is so proportioned that this can be done, then the compressor or larger machine needs to run only for a short space of time in the morning and in the evening. In the refrigeration installation the machinery is located in the basement.

We have now suggested some of the materials that go to make up an ideal modern small community hospital. Many of these institutions will not be able to afford a good many of these materials and some of these modern conveniences, but the problems ought to be met frankly and fairly in each hospital. There is the question, for instance, of fire protection; but the question of fire protection is no more important than the problem of asepsis and disinfection and cleanliness of the premises.

FIRE PROTECTION AND ASEPSIS.—Fire protection involves the use of fireproof materials that will permit the cleaning of every crack and crevice of the institution. Some hospitals will not be able to afford one any more than another of such materials, but always, in planning a new hospital or in altering an old building for hospital purposes, the board of trustees and the architect and the superintendent of the institution must take these items into consideration and give them their proper weights in the final selection. If it is decided eventually that a fireproof hospital cannot be afforded, and thus proper protection given to

patients, then the other horn of the dilemma must be chosen, and such exits and points of egress must be found as will permit the removal of patients on the shortest notice; and more than one exit must always be available, and these exits must be of such character that bed-ridden patients can be handled through them on stretchers or cots, or otherwise. Large balconies, with direct egress and stairs to the ground, should be provided, so that patients may be taken from the building as quickly as possible and from these safety balconies to the ground. These balconies make admirable sun and sleeping porches at the same time.

This same kind of solution of the problem of asepsis and disinfection is always possible. If wood floors must be used and acute corners, then the floors must be properly treated, so that they will offer the least inviting residence for micro-organisms. Square corners must be sealed, and capable of being reached by cleaning brushes and cleaning solutions, and it must be thoroughly understood that it will cost more to keep such a hospital clean than one that is properly built along modern lines. In other words, somebody will have to work harder or more people will have to be employed to do the work in a hospital that does not contain modern conveniences and is not a modern

structure. In a final analysis, the more expensive architecture and the completer conveniences will pay; they will pay in reduced cost of upkeep over a long period of years and they will pay by reducing the pay roll of employees.

In presenting the above it is not the object to urge its consideration where the community's finances will not permit of the construction of such buildings, and it is not our object to discourage communities from proceeding with the construction of the best hospital the community can afford. As we said at the outset, the main point is to get a hospital; every effort should be made to get the right sort of hospital, but get your hospital, and conduct it in such a way that the community will soon realize its value, and it can be safely promised that a hospital properly conducted need not want for funds for its maintenance in any community in this country. If such a hospital is poor and without funds for its proper conduct, the fault lies at somebody's door. Generally speaking, financial stress in these small hospitals is due to want of two things—want of confidence on the part of the community because of the character of the work done in the institution, or because the hospital is badly managed on its physical and psychical sides.

WHERE WELFARE OF EMPLOYEES IS CONSIDERED OF GREAT IMPORTANCE

The Westinghouse Electric and Manufacturing Company Conducts Systematic Welfare Work—Compensation in Case of Sickness or Accident—Pension System

By M. C. TURPIN, PITTSBURGH, PA.

THE welfare of employees is considered of great importance by the Westinghouse Electric and Manufacturing Company, and accordingly is given a great deal of attention. Much time and a large amount of money have been spent in bringing all branches of welfare work to a high state of efficiency. The scope of this work includes old age pensions; compensation for accidents occurring during discharge of duties, with payments during periods of disability and free medical and surgical attention; a savings bank for employees; a technical night school; a club equipped with reading, lecture, and recreation rooms, and a gymnasium, where employees may find diversion during evening hours; and lunch, rest, and recreation rooms at the plant for the benefit of the women employees.

A great deal of the welfare work is conducted by a relief department, under the direction of a superintendent, who has a medical director and a number of medical examiners under his jurisdiction. Here any employee may receive medical or

surgical attention free on account of accident or illness occurring while on duty. Compensation during disability is also provided when such disability is due to accident occurring during discharge of duties. The payment of small monthly dues entitles an employee to further benefits on account of sickness or accident from causes other than employment. In the event of death these latter benefits are duplicated by the company. If death results from an accident occurring while on duty, pensions are paid to dependents. A pension plan is also in effect, and employees of the company who are members of the relief department, and who at the age of 70 years have completed twenty years of continuous service, are retired on a pension of 1 percent of the average monthly wages during the last ten years of employment for every year of continuous service, with a minimum of \$20 a month and a maximum of \$100 a month.

The company pays the entire expenses connected with the maintenance of the relief depart-

ment, including equipment, supplies, and salaries. All sickness and accident benefits are paid by the relief department from the dues contributed, except for accidents occurring in the plant, for which compensation is provided by the company, as previously mentioned.

In order to care adequately for the accident and

ing room, and this room is equipped with a complete supply of medicines, bandages, and dressings. In addition, there is a magnet for removing pieces of metal from wounds quickly and painlessly. The x-ray room is furnished with a modern machine for examinations. The rest room has sanitary hospital cots, and the supply room contains a reserve stock of medicines and bandages.

This division attends to about 450 cases a day, about 120 of which are new accidents. An average of one-tenth of the number of patients have to go home, and one-tenth of these are disabled exceeding fourteen days. The usual disability, however, owing to the expert attention given, is under five days. Accidents to eyes and fingers are the principal cases, and the injuries to eyes are usually the result of one of two causes—flying emery or dust.

The women's division is located in a section of the plant easily accessible to the majority of the women employees. Formerly this division was a part of the main men's division,

and it was then necessary for the girls to go to the main division for treatment. It was noticed, however, that they were not taking as full advantage as they might of the privileges



Fig. 1. Westinghouse Electric and Manufacturing Company, East Pittsburg. Women's lunch room.

sickness cases occurring while on duty, the relief department is divided into divisions, the main one being the men's division. Recently a separate division for women has been opened, and in addition there are six auxiliary divisions. Each division has the necessary equipment to enable those in charge to take care of cases requiring medical attention and minor surgical operations. In all, ten physicians, three trained nurses, and a number of attendants are employed. First aid is given only to cases requiring hospital treatment. When it is necessary to send an employee to the hospital for treatment, the company provides an automobile for that purpose.

The main men's division consists of receiving, examination, and dressing rooms, a rest room, an x-ray room, and a supply room. Four physicians are in attendance at the receive-



Fig. 2. Westinghouse Electric and Manufacturing Company, East Pittsburg. Specially designed coffee percolators used in connection with women's lunch room.

afforded, and after investigation it was decided that the division was located too far away from the sections where they worked, so a separate division was fitted up. Now a greater number of girls visit this division in a day than formerly went to the main division in a month.

Similar to the men's division, this division has



Fig. 3. Westinghouse Electric and Manufacturing Company, East Pittsburg. Treatment room of the women's division.

a receiving room, rest room, and wash room. The receiving room is equipped for the performance of minor surgical operations. The equipment includes a supply of medicines, bandages, and dressings; a complete set of instruments, kept sterilized; eye examination and treatment chair; eye lamp; electric water heater; electric sterilizers; electric fans; linen chest and towel cabinet. The rest room contains six sanitary hospital cots, where girls may rest when sick or injured. Two of the cots are equipped with electric heating pads. The furniture of this division is finished in white, the walls are painted green, and the windows have dark-green shades, so that the room may be darkened. Everything is spotlessly clean and the entire appearance is exceedingly inviting.

The women's division is open from 7 a. m. to 5 p. m.,

including lunch hour, and the services of those in charge are available to any of the more than 2,000 women employees, whether members of the relief department or not. Should a girl meet with an accident or be taken sick, she is taken to the receiving room of this division, where proper attention is given her by a trained nurse.

Should the case be serious, a physician is called from the main men's division, who then assumes charge or gives the necessary directions. Not only are cases requiring medical and surgical treatment taken care of in this division, but the girls frequently come to ask advice on various questions in connection with their work, health, home life, and other subjects, all of which is cheerfully given.

An interesting feature of the welfare work at the Westinghouse plant is the lunch, rest, and recreation rooms provided for the women employees. In the lunch rooms comfortable dairy chairs are installed. The girls furnish their own lunches, but tea, coffee, and milk are supplied free by the company.

Every day nearly seventy-five gallons of tea, coffee, and milk are used in one of the rooms. The coffee, ground by electric grinders, is made in large, especially designed percolators. The cups



Fig. 4. Westinghouse Electric and Manufacturing Company, East Pittsburg. Treatment room of the men's division.

are washed by an electric dish washer. Popular magazines are available, so that the girls may pleasantly spend the remainder of the lunch hour. These rooms afford a clean, comfortable place for



Fig. 5. Westinghouse Electric and Manufacturing Company, East Pittsburgh. Electric magnet for withdrawing particles of steel and iron from the body.

passing the noon hour, and they are well patronized.

The Westinghouse Electric and Manufacturing Company has been a leader in the betterment of working conditions and in protecting its em-

ployees from injury. In the construction of the plant careful attention has been paid to providing healthful working quarters, and the sanitary arrangements are of the most approved character. Carefully designed and efficiently maintained lighting and ventilating systems contribute to the comfort and health of employees. Pure water is furnished by artesian wells, artificially cooled, and pumped through plant.

Not content with waiting until accidents occur and then taking steps to prevent their recurrence, it is the policy of the company to eliminate all possible sources of injury by continual and methodical investigations. The safeguarding of machines and processes is placed directly in charge of a thoroughly trained mechanical engineer. Special care is paid to the guarding of gears, line shafting, belting, crane runways, electric wiring, industrial railway tracks, and crossings, and to protection from processes either hazardous in themselves or giving off noxious gases. To insure the constant effectiveness of the safety devices, they are inspected at regular intervals. Despite the most extensive use of safety devices, experience shows that some injuries are likely to occur in any large plant, due to an inherent factor in the human being. Careful investigation in the works of the company shows that but one-fourth of 1 percent of the disabling accidents occur owing to the absence of safeguards, while 22½ percent are the result of carelessness.

THE MODERN HOSPITAL AS A HEALTH FACTORY

The Individual No Longer the Dominant Factor—Good Health of Humanity in General Is the Product—Factory Principles Should Obtain—Division of the Work According to Modern Business Demanded

BY FREDERICK D. KEPPEL, M. D., CAZENOVIA, NEW YORK

THE Latin word "hospis" is the root of the modern words "hospital" and "hospitality." The word "hospital" refers to the place or building where guests are received, while the word "hospitality" refers to the manner in which they are received and treated during their stay. In a broad sense, a hospital is a place where guests are entertained without reference to their state of health.

It was common during the middle ages to speak of the places set apart for lepers as "'spitals," the word being defined as something ejected or thrown out. This definition is not very far wrong when applied to sick people generally, for when one is ill he is temporarily cast out from among the physically fit. As we accept the word, a hospital is an establishment for the care and treat-

ment of the sick or wounded, and I will try to prove that the hospital as an institution is far more important than any or all the sick who may be under the care of its staff at any time.

Probably the first move toward hospital treatment was made when separate camps were prepared for sick or slightly wounded soldiers, making it more convenient to treat and care for them. The modern hospital is conducted on about the same theory as were the camps and retreats of earlier times; that is, buildings are provided where the sick may receive more convenient care and treatment, and, while we have made surprising advances, we still look on the patient as the main consideration, and continue to multiply a patient, a nurse, and a doctor by a number representing the bed capacity of the institution, mak-

ing all our plans on this proposition as a starting point. I shall try to prove that this is a wrong premise, and that a hospital is in reality a factory in which broken and diseased persons are repaired as far as human ingenuity permits.

A sick person is not only a nonproducer of wealth—he is also a destroyer of it. When an individual becomes incapacitated for work through illness, it is evident that his regular work must be left undone or a second person must do it for him; a third person must attend to the invalid's wants, and a fourth person, acting in the capacity of attending physician, must give part of his time. Hence it will be noted that every sick person consumes the wealth-producing capacity, for at least a part of their time, of four people. This condition of affairs has led thinkers to conclude that it is more economical to get all this nonproducing material into one large building, where fewer people will be employed in the care of these temporarily worse than useless men and women, and the hospital has been the result.

The question before us is, Which is the more important to the community at large—the invalid or the plant which provides for his care and treatment? If we look at the problem from the point of view of the sick man and his family, we will at once conclude that he is of the greater value, but, if we observe conditions from the standpoint of the political economist, the invalid becomes a mere incident, while the institution which changes him from a nonproducer into a worker is of the greatest importance to the general public.

A few years ago parents taught their children at home or employed a competent person to do the work for them. Some bright investigator discovered that one tutor could teach several children about as easily as he could teach one, and the private school was the result. By observing the superiority of the educated youth over the uneducated, the community decided that it would be well if all children should receive a certain amount of mental training, and, because many parents could not afford the expense of a private school, the state took up the burden and provided free schools, where any child could be sent if his parents thought best to educate him. It will be observed that up to this point the child was the important consideration; but, as time went on, those who made teaching a study awoke to the fact that the child was simply raw material, and it became apparent that it was far more important to provide suitable buildings and equipment, where all the raw material might be turned into good citizens, than to educate any special group of children. This theory has been perfected until every

child must attend school in spite of the wishes of either himself or his parents. The hospital is an absolutely identical proposition. We are, however, about at the private school stage in our development and must advance toward perfection. If sick people and ignorant children did not exist, then there would be no use for either hospitals or schools, but illness and ignorance are facts to be faced, and institutions must be provided where the raw material of either class may be converted into a finished product.

The average citizen will hardly take the trouble to notice a funeral procession or a crowd of children on the street; still, if questioned, he will point with pride to three classes of public buildings—namely, the churches, the schools, and the hospitals. Very few people care to inquire into the spiritual, intellectual, or physical condition of either chance acquaintances or strangers, and yet all of us will become enthusiastic when discussing the institutions which specialize on the spiritual welfare, the education, or the health of the community at large. If we have arrived at the point where we can read or speak of the educational or religious institutions without wonder, why can we not think of the health institution in the same way? We think of the church as an institution, the school as an institution, but the hospital is still a building where Smith, Jones, and Brown are lying sick and receiving care.

If I have succeeded in proving that the hospital should be looked on as an institution or health factory, rather than as a building where certain invalids are receiving care and treatment, it may be well to consider ways and means looking toward the improvement of present conditions.

It would seem that the whole question of successful hospital management revolves around the proposition which I have attempted to prove—namely, Which is the more important to the community at large—the collection of invalids or the institution which specializes on the conversion of the nonproducing and wealth-absorbing sick men and women into wealth-producing citizens? If we accept the former theory, we will be looking at the subject from the standpoint of the retailer in business, who expects to get his profit from the small, detailed sale; while if we give our assent to the latter view, we will be looking on the question of hospital management from the point of view of the wholesale man, who looks for his profit from mass sales to the smaller dealers.

If the hospital really is an institution which specializes on changing an invalid into a healthy person, then the hospital is to all intents and purposes a manufacturing plant, and any scheme looking toward its successful management must

be similar to the schemes used in other manufacturing establishments of equal size and grade. We will, however, find one very great difference between the plant intended to work up the raw human material and, for example, a woolen mill. When the executives in charge of a woolen mill contemplate a reduction in manufacturing cost, they look for machinery to take the place of the more expensive hand labor. In the hospital we have very little machinery to use, and, if we wish to improve conditions, we are forced to make the employee more efficient than formerly. I believe we have about reached our limit in the effort toward improving conditions or in decreasing the patient day expense as long as we continue to work on the theory that the invalid is the important consideration; but if we take the view that the institution is of paramount interest, then most of us will find ourselves on the shore of a great unexplored ocean, where we have thus far only picked up and admired a few pretty stones and shells.

The rules governing any successful manufacturing plant are the same in a general way as those used in every other plant running at the same grade of efficiency. When we consider the hospital as a health manufacturing plant, we find that about the same management is required as for other industrial establishments of equal size. Hospital stockholders include pretty nearly everyone who has shown interest in the institution, and it would not hurt the finances of a number of hospitals if the casual visitor were treated with the courtesy a manufacturing establishment would show to a stockholder.

The board of trustees in most hospitals has duties similar to those generally assumed by a corporation board of directors. The average hospital superintendent is such in name only. In reality he is a manager of petty detail, most of which should be shouldered by the heads of departments. The resident head should not be worried with the details and little problems arising in the daily work, for, if he is, he will have no heart for the larger duties of his office. It is against nature for a tired man to be courteous, and discourtesy spells failure, even though the superintendent has all the other good qualities. The hospital superintendent should be made of the sort of material which goes to make up the successful general or admiral; but he should be more than this, for he is dealing with men and women whose duty it is to care for the sick, encourage the suffering, and to be a guide and stay to those who are dipping their feet in the dark river of death. While he must be able to order the charge, even when he knows he cannot bring him-

self or his followers out of it alive, still he must have sympathy and "the common touch" sufficiently to impress his subordinates with the fact that the poor, ignorant, and dirty occupant of a charity bed is still a human being, with capacity to suffer keenly, and not, as some would have us believe, simply a case. Show me the superintendent, and I will soon tell you why a patient experienced the treatment he received from nurse or employee.

The hospital work logically divides itself into five departments—namely, staff, nursing, cuisine, house management, and finance. It is universally acknowledged that four of these department heads should be in residence, but that the statement what is true of four is equally true of the fifth appears to be a new thought. The staff, as a general rule, is an outside body, neither taking orders from nor answerable to the hospital authorities to any great extent. The staff is the highest trained department in hospital work; their duties are entirely mental, and it would seem that, when the daily clinical work has been finished, they should be relieved from the legislative and other detail work which many institutions pile on them.

It seems to me that the chief of staff should be in residence. He should be a man of sufficient standing to demand the respect of his colleagues, and his authority over the staff ought to be as great as that of department heads in industrial vocations over equally high-grade help under their jurisdiction. The chief of staff selected by any sensible superintendent would scarcely presume so far as to dictate to a competent physician, but he should have supervising authority and ought to check incompetent or dishonest treatment. In appointing an officer to this important position, the superintendent should act only after he has consulted with the various members of the staff and thus learned their preferences.

It would seem that this idea of a resident chief of staff would raise the dignity of every man connected with the hospital service, for any physician who retains his position from year to year would have prima-facie evidence that his services are of a kind to raise the standing of the hospital, and in a very short time this reputation would react on the individual by raising him in the estimation of his brother physicians and of the community at large. The only changes I would suggest in the other departments would be to broaden the authority of each chief and to organize the five heads of departments into an advisory board, meeting regularly with the superintendent, to discuss plans for the betterment of hospital conditions.

When it is generally understood by boards of trustees and superintendents that a hospital is too big a proposition for one person to run successfully, when the heads of departments are allowed to assume the honors and responsibilities

of management in their respective divisions, and when cooperation and team-work has been fully organized, we may look for a sharp increase in the efficiency of the hospital force and probably a decrease in the patient day expense.

THE CONTAGIOUS BUILDING, MEMORIAL HOSPITAL, NEW LONDON, CONN.

Unit System of Nursing Care of Infectious Diseases Depends on Observance of Simple Technic—Some of the Features in the Building and Incidents of the "System."

BY MISS NELLY R. BURBY, R. N., SUPERINTENDENT



Fig. 1. Memorial Hospital. Contagious ward.

THE contagious ward of Memorial Hospital, New London, Conn., was opened for patients in February, 1914. The unit and aseptic technic followed is rather unique when we compare our present-day methods with the time when all infectious diseases were isolated to the exclusion of all, and consequently the neglect of the patient. To-day, with our enlightened ideas concerning contagion, we are enabled to care for such cases with comforts not possible in the ordinary home.

The new ward stands 80 feet from the older building, and is connected with a tunnel, which enables one to travel back and forth without exposure during stormy weather. Nurses are sent to the contagious ward in their senior year or, as has happened recently, in the junior year after having had training along aseptic lines. A graduate nurse is in charge, and immediately begins her instructions when the new arrival reports for duty.

It is understood that nurses in the school take this training, and, judging from reports of the physicians here in New London, the recent graduates have proved a Godsend. We are all aware of

the natural fear of infection, and oftentimes it has extended into the nursing ranks, but we must condone this rather than condemn, as a great many nurses have not had opportunity to improve themselves along these lines.

Our nurses are allowed full freedom when off duty, and also room in the nurses' home. While in training, their lives, at best, are trying, and apt to leave them with narrow views of life unless some effort is made to combat the influences which lead to this condition. To increase their efficiency and broaden their outlook, we insist on plenty of time off duty and out of doors. To do this requires, of course, plenty of nurses, and we attribute our gratifying results to just this.

In two years we have had one cross-infection, which occurred during the first month, and two nurses contracted diphtheria—one from being overzealous and had gargled her throat until she had made it fertile ground for infection, and the other we trace to having been spat on during intubation.

When a patient is admitted, he is given a separate room. All clothing is wrapped in a sheet and

sterilized, ready to be worn when patient is dismissed. After a patient has been discharged, the mattress, pillows, and blankets are sent to the large sterilizer, and the walls of the room, bed, table, and floor are washed in pyxol solution 1:500. The room is well aired at all times.

This winter we cared for an epidemic of diph-



Fig. 2. Memorial Hospital. Room containing three beds where patients have been "barriered."

theria without cross-infection; indeed, once the unit system is introduced, the life of a superintendent is made comparatively happy, as the infection among nurses is minimized.

Last June New London was visited by a small-pox epidemic. We cared for eighteen cases in the



Fig. 3. Memorial Hospital. Contamination room. Orderly placing infected clothing in sterilizer. This sterilizer extends through the wall into the clean room.

lower part of the building without trouble and at comparatively small cost to the city. During the year our unit system has enabled us to care for scarlet fever, diphtheria, mumps, measles, whoopingcough, follicular tonsilitis, and erysipelas.

Daily rounds are made in the contagious ward, the same as in the general wards, and up to the present time no ill effects have resulted. Before

going on duty, nurses remove all outer garments in a room provided for this purpose, and opposite is a room where clothing worn while on duty is kept. This exchange of clothing is made every time a nurse leaves the building, and the nurses do not come in contact with patients unless gowned. Each room is equipped with running water, and a nurse must wash her hands after doing or touching anything in the line of duty, no matter how



Fig. 4. Memorial Hospital. Clean room. Nurse removing sterilized clothing.

trivial. It becomes "second nature" to stand away from each other. Skirts are fairly short, and caps are made to cover the hair completely.

In a room containing more than one bed we sometimes "barrier" a case. The patients are kept as much separated as though they had a single room. The system when properly employed will prevent transmission of disease. Our nurses are taught, when suspicious symptoms are observed, to immediately "barrier" a case until arrival of physician.

The Allentown Hospital, of Allentown, Pa., is the recipient of a gift of \$50,000 from Mrs. Sarah Catherine Hunsberger of that city. The money comes from the estate of the late Reuben Ryle, of the Allentown Silk Company, whose father is said to have manufactured at Paterson, N. J., the first silk made in America. Mrs. Hunsberger was Reuben Ryle's housekeeper, and under his will was bequeathed certain property plus whatever cash he had in the bank at the time of his death. Between the time of the making of the will and the death of Mr. Ryle, \$50,000 in bonds, which had been bequeathed to the Allentown Hospital, were sold and the proceeds placed to Mr. Ryle's credit in his bank. The executors decided that the money belonged to Mrs. Hunsberger, but she has arranged that it shall go to the hospital in accordance with Mr. Ryle's intention.

Miss A. H. Campbell, for the last forty years superintendent of the Faith Home for Incurables, 546 Park Boulevard, Brooklyn, N. Y., has been compelled by ill health to relinquish the active management of the institution. Miss Campbell's influence will still be felt in the institution, however, since she has been given an honorary position on the board of managers. The home is interdenominational, and, having no age limit for patients, is said to be the only institution of its kind in the city.



The MODERN HOSPITAL

Editorial Office . . . 6 North Michigan Ave., Chicago
Business Office . . . Metropolitan Building, St. Louis

EDITORS.

Henry M. Hurd Fidelity Building, Baltimore
Frederic A. Washburn . . Mass. General Hospital, Boston
Winford H. Smith . . . Johns Hopkins Hospital, Baltimore
S. S. Goldwater Mt. Sinai Hospital, New York
W. L. Babcock Grace Hospital, Detroit
John A. Hornsby . . . 6 North Michigan Ave., Chicago

SUBSCRIPTION.

Under domestic postage, \$3.00; foreign postage, \$3.50 (14 Shillings). Single copies 35 cents.

Domestic rates include United States, Cuba, Mexico, Porto Rico, Canal Zone, Hawaii and Philippines.

Contributors, subscribers, and readers will find important information on advertising page 34.

Another Hospital in Politics

Another splendid public hospital has been made to suffer by the injection of politics. This time it is the thousand-bed State Charity Hospital of New Orleans. The Charity Hospital is conducted under the auspices of the state of Louisiana and by a board of seven trustees appointed by the governor. Three years ago the then board appointed Dr. Charles D. Wilkins, on the recommendation of Dr. S. S. Goldwater, as superintendent of the hospital. The hospital then needed reorganizing and some splendid work has been done during these three years, and the hospital became one of the best in the country, working in its scientific departments in affiliation with Tulane University and for the best interests of the sick poor of the state of Louisiana, and especially of New Orleans. Dr. Wilkins reorganized its finances, its staff, and its methods of procedure. The medical profession and those who knew what good hospital service is have spoken in the very highest praise of Dr. Wilkins' administration.

The other day Governor Pleasant, of the state of Louisiana, who has the appointment of the board of trustees, appointed four new trustees, who visited the hospital for about half an hour and who then held a meeting, at which the governor presided. Over the violent protest of some

of the old members, who had worked hard with Dr. Wilkins to create a good hospital, the governor and his appointees dismissed Dr. Wilkins and named a new superintendent in the person of Dr. S. W. Stafford, a New Orleans surgeon, who, the New Orleans newspapers claim, had had no managerial experience whatever, and the only excuse for his appointment lay in the fact that he had served as intern in Charity Hospital under a former administration.

For three years Dr. Wilkins, an able hospital administrator, trained to the service over a long period of years and in exacting positions, has worked day and night, and has employed every device of which he had knowledge to bring Charity Hospital up to the foremost rank of modern institutions, and now, without an hour's warning, he is dismissed.

Without distinction of party, the New Orleans newspapers are up in arms; prominent citizens call the action of the governor outrageous—and outrageous it certainly is, for, however good a surgeon Dr. Stafford may be, and however urgent the governor's desire for a change may have been, the giving of the place to an untrained man is reprehensible, to say the least.

How long are the people of this country going to permit the most sacred institutions in their communities to be footballs of petty politics, subject to the caprices of those who happen to be in brief authority!

The Best Part of the Program

During the past month so many inquiries have come to the editorial office of THE MODERN HOSPITAL concerning details of the plans for the Philadelphia meeting that it is very safe to make the prediction now that the Philadelphia meeting is to be one of the largest, if not the very largest, in attendance that the association has ever had.

So much is quite good, but it is not sufficient, and those who intend to be present at the convention should make up their minds before going that they must participate in the proceedings, take part in the discussions, form one individual of the many groups that will be brought together for pleasant times of all sorts.

It has been said by some wiser heads in the hospital world that the best things they have received from the conventions came not from public addresses on the floor, but were the result of little semi-private group talks; a luncheon in the grill, or a sandwich with some light drink after the day's work was over. It is impossible for four or five hospital people to get together and indulge in conversation of any sort without there being dis-

seminated some immensely profitable ideas. It is these little groupings that ought to be encouraged at Philadelphia. Some special hospitals have special problems, and the superintendents of such institutions, if they will get together, can help each other immensely by telling, each one his own story, of some problem and how he mastered it.

For several years now it has been common practice in the conventions of the association to let the members enjoy themselves as they saw fit, and no pretense has been made of providing entertainment of any kind. A good many complaints have arisen on that score, and many members, especially among the women, have wanted some social features injected into the convention period. At the San Francisco meeting this apparent inclination gave rise to a resolution demanding some social features in the Philadelphia program. Philadelphia seems to have gone farther than could have been expected, and a program full of good things has been provided, not only in, but outside, the convention hall; and if those who attend the convention do not enjoy themselves and profit greatly both mentally and physically, it will be their own fault.

The materials will certainly be at hand for everybody to have a good time and to take back home a vast accumulation of invaluable information.

A Logical Annual Report

During the past two or three years we have been frequently importuned to define what an annual report should be, and we have taken frequent opportunity to deplore the general trend, in annual reports, toward unreadableness and a statistical preponderance that made of them something to be shunned rather than sought after and enjoyed.

These thoughts are apropos of the receipt in the editorial office of THE MODERN HOSPITAL of the first annual report of the Winifred Masterson Burke Relief Foundation, of White Plains, N. Y.

Dr. Frederic Brush, superintendent of that institution, is, first of all, a poet; he has originality, initiative, and an immense fund of imagination. Those who have not seen Dr. Brush's first annual report should write to him and get a copy, and read it. We promise that they will not only enjoy it, but that they will greatly profit from its study.

The statistical part of this report is confined to some fractional pages under the head of each of the four branches of the institution. There are a few rules for patients published; a small amount of space is given to reproduction of information for those who expect to send convalescents to the institution; a page or two of forms, such as ap-

plication blanks, return and "follow-up" cards; there is a ground plan of the Foundation area at White Plains, excellent photographs of the group of buildings, individual buildings, and a number of detail photographs; there are also photographs from the boys' branch and from the branch for colored patients. But the body of the report is a story, interestingly told, in good literary style and interest compelling from start to finish. It begins with the introduction of the late John Masterson Burke, a nonagenarian, who gave millions of his money during his lifetime to found the convalescent home as a memorial to his mother, and other millions at his death.

The story of the building operations and the organization of the home is told, and a most interesting account of Dr. Brush's conception of the convalescent field, the past, the present—and a prophetic vision of the future.

Nothing seems to have been done in a cut-and-dried way in the conception of the Foundation or the execution of the trust confided to the board of trustees by the grand old founder.

Dr. Brush tells of the admission of patients, which is a unique function, the preference given to certain sorts of cases—and why. He tells of the cooperation of the hospitals of New York city and of the beautiful team-work that is done to further the interests of the patients to be sent to the institution; he tells of the transportation and the interesting experiments that were made before the present excellent omnibus service was introduced.

The best part of the story in the book concerns the psychology, "the spirit of the Burke Foundation," and he tells of the gradual permeation of this spirit into the hearts and minds and souls of those who go there to get well. He tells of the recreations, the occupations of patients, and gives the reasons and methods employed by which certain patients are given certain things to do at certain times, and how other patients are kept away from those things and given something else—and why.

It is most interesting to read Dr. Brush's story of the convalescence of his heart cases and the rehabilitation of patients who have had long recurring heart attacks, and in this connection his story of the difference between youth and age in the care of these cases opens up some new fields of thought for those who want to think. He writes about the other classes of cases that the home is glad to receive and what it does for them; his handling of chronic diseases, the subnormal types and how they are brought up from the stage of social liability to become community assets.

In short, Dr. Brush has given us what we con-

ceive to be almost an ideal institution report, and we are so enthusiastic about it that we heartily wish as many as can of the hospital people of the country could get it and read it, and study it, and, unless they can better it when they come next to writing their own annual reports, that they would follow it.

Grading of Nurses

As THE MODERN HOSPITAL goes to press, a preliminary copy of the report of the standing committee on grading and classification of nurses reaches the editorial office, and elsewhere in this issue we have undertaken to give a synopsis of this report, more especially for the benefit of those who will not be able to attend the Philadelphia convention.

We urge hospital and training school heads to read our brief synopsis, and to get a copy of the report and to study it. It is really a very important document on one of the most important topics that interests the hospital field today.

Those who have followed the proceedings of the American Hospital Association will know that this committee was appointed in spite of much opposition, that its personnel was changed or added to, and that it has been sent back to further study its problem for the past three or four years.

During the existence of the committee nursing problems have quite radically changed in some respects, and we are a good deal further along in the settlement of some of our problems than we were when this committee was first appointed. A report of the nature that the committee has now made would have been utterly preposterous four years ago from the standpoint of acquiescence of the association, and it may be fairly doubted whether the nursing profession will quite fall in even now with a good many proposals of the committee; but nevertheless points that the committee were given to study and report on four or five years ago have developed amazingly and to such an extent that many of those who were actually opposed even to the appointment of a committee for the purpose will now be more than glad to meet the committee half way and even to indorse nearly all the proposals that it now makes.

Originally those members who were insistent on the appointment of a special body to study this subject believed in the creation of three distinct classes of nurses, one of which should be made up of women trained to the point of being only a grade above the ordinary domestic, and whose chief duty would be as mother's helper in the home in time of sickness. The committee has now seen fit to shift its position along more logical lines, does not insist on such women being called

nurses, or being employed for actual trained nursing purposes, and nowhere in the report is it insisted that these women shall be in any way identified with the nursing body, but, on the contrary, states that it be a distinct class, with none of the privileges and none of the credentials of trained nursing.

This report ought to be welcome in the Philadelphia convention, and it should lead up to further studies on some of the problems recognized by the standing committee as still unfinished and unsolved.

Hotel Dieu de Saint Joseph, Montreal

To Jeanne Mance must be given the glory and honor of founding the Hotel Dieu Hospital of Montreal, sketch of which appears on the cover page of this issue of THE MODERN HOSPITAL, and to Madame de Bullion, whose princely munificence and encouragement made possible the fulfillment of the ambitions of the young foundress.

Born in 1606 of an illustrious family in Champagne, France, Jeanne Mance shortly became possessed of the idea of ministering to the sick and wounded in distant Canada, then known as New France, and in 1641 she embarked with Père Laplace, twelve male colonists, and a solitary woman companion, arriving that autumn at Quebec, where she wintered. In company with Paul de Maisonneuve, she reached Montreal May 18, 1642, and established in her humble habitation, on the site of the present St. Paul street, the nucleus of the first hospital on the island of Montreal, where, with her own unaided hands, she attended the sick and wounded settlers and Indians. In 1644 Jeanne Mance moved to larger quarters, a change representing an outlay of 6,000 francs, provided by her patroness, Madame de Bullion. This place stood for fifty years, until fire completely razed the buildings.

For seventeen years Jeanne continued unaided in her chosen field until in October, 1659, there arrived in Montreal three hospital sisters of the order of St. Joseph, a religious community founded at La Flèche, France, for the purpose of providing hospital facilities in Ville Marie (now Montreal). These pioneer sisters were Judith Moreau de Brésoles, Catherine Macé, and Marie Maillet. Montreal at that time consisted of some forty houses and 260 settlers.

In 1673 death claimed this noble, self-sacrificing worker, and her body was placed under the church connected with the hospital, being completely cremated when these buildings were burned to the ground in 1695. Subsequent fires in 1721 and 1734 wiped out of existence the buildings occupied by the reconstructed hospital. The



Fig. 1. Hotel Dieu de St. Joseph, Montreal.

present-day institution at the foot of Mount Royal, facing on Pine avenue, was erected in 1861, being transferred uptown from its original site on St. Paul street. From the magnificence of its location and the character of the buildings, it is a just

two hundred and fiftieth anniversary of the arrival of the three Sisters of St. Joseph. Records kept by the sisters from 1760 to 1916 show some 235,000 cases treated at the Hotel Dieu.

This sketch would be incomplete were not mention made of Fanny Allen and her association with the Hotel Dieu. This genteel daughter of General Ethan Allen, whose name is so intimately connected with the early history of the United States, entered the sisterhood of the Hospitalières de St. Joseph in 1808 at Hotel Dieu, Montreal, she having the honor of being the first woman born in the United States to enter this community. Her name is perpetuated by the Fanny Allen Hospital, near Burlington, Vt., on the site of the Allen homestead. In conclusion, well may it be repeated that the history of the Hotel Dieu is the history of Montreal. War, famine, and pestilence have they both successfully passed through. Nothing has dampened the ardor of the sisters of the Hotel Dieu, and today their work stands out effulgent in the success of their undertakings. To them Canada in general, and Montreal in particular, is deeply indebted for the continuous and continued exhibition of unselfishness, charity, and progressiveness.

WILLIAM A. L. STYLES, M. D.

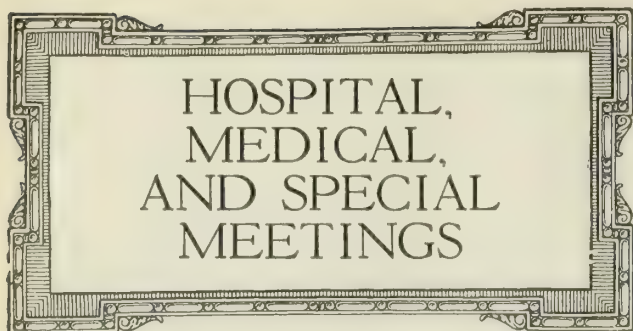


Fig. 2. Jeanne Mance monument, Montreal.

cause of civic pride to residents of Canada's metropolis.

Through the initiative of Archbishop Paul Bruchesi and the generosity of citizens of Montreal, there was unveiled on September 2, 1909, a monument to Jeanne Mance, commemorating the

The Hunterian Laboratory, a five-story building erected for the Johns Hopkins Hospital, Baltimore, will be ready for use when the medical school opens in October. The new laboratory was made possible by a gift from Andrew Carnegie some years ago. The building is of reddish brick, with stone trimmings, and harmonizes with the other structures of the Johns Hopkins group. On the first floor will be the exhibition and class rooms of the department of art as applied to medicine, and the entire second floor will be taken up with the laboratories. The third floor is to be devoted to medicine and pediatrics, and the fourth to experimental pathology. The top floor will be used entirely for the harboring of animals to be dissected in the interest of science.



Address of President Winford H. Smith, M. D.,¹

President of the American Hospital Association.

Members of the American Hospital Association, ladies and gentlemen: Following the time-honored custom which calls for an address from your president, I have endeavored to express to you in a rambling sort of way some of the thoughts which I entertain concerning this association and concerning hospital administration.

The criticism has been frequently made that this association is not accomplishing all that it should, that the membership should be more representative, and that something radical needs to be done to develop the association and to give it new life. I dare say the association could accomplish more, but is not that true of any organization? And is it not indicative of a proper state of mind, that we are not fully satisfied? However that may be, it is my profound conviction that the American Hospital Association, by its annual meetings and the papers and the discussions both in and out of session, by the enduring friendships formed at the meetings, has had a pronounced effect on the development of the hospital movement in America. I do not share the view that, because we have not a larger membership, the association has failed. Indeed, I can well remember that much help and much stimulation was obtainable when the membership was even smaller than it is now.

But let us consider for a moment the question of membership. Undoubtedly we should have more members. A few years ago the association was enlarged to take in trustees, members of medical and surgical staffs, and superintendents of nurses. Many of these have availed themselves of the privilege, but in reality only a small percentage of those who are eligible. To me this is not surprising or unexpected. Trustees are for the most part busy men of affairs, and, while they would no doubt enjoy and profit by attendance on these meetings, I think we can hardly expect them to attend, except those local to the convention city. Physicians and surgeons are already members of so many clinical societies that it is almost impossible for them to attend the meetings of those societies to which they belong; and, furthermore, it is the clinical side of hospital work in which they are primarily interested. Superintendents of nurses have their own association with a membership of some 30,000, and, with section meetings and programs quite as interesting to them as anything which we could offer, it is not surprising that they have not joined our association in large numbers. We could hardly expect it. In my opinion, so long as we maintain our present organization, we must expect our

membership to be made up principally of those who are engaged in administrative work—namely, the executive officers.

Why, then, have we not more of the hospital superintendents on our list? There are several reasons. Undoubtedly there are many who have not yet seen the advantages of association with others engaged in similar work, and who are content to revolve in their own little circles. Many others, if they attend these meetings, must do so at their own expense and during the time allotted to them for vacation. As to those who are so short-sighted as to have no desire to get new ideas and the point of view of others, I have nothing to say; but for the many who are deterred from joining this association and attending its meetings on account of the expense and time involved, I feel great sympathy. We must try to help them. This year the chairman of the Executive Committee, Dr. Washburn, sent out approximately 5,000 letters addressed to boards of trustees, urging that their hospital superintendents be sent to this meeting, and setting forth the advantages of membership in this association. I trust those letters may be fruitful. However, we have no cause to despair because the association does not grow more rapidly. If our meetings are really beneficial and stimulating to the thousand or more members which we have, then a great amount of good is being accomplished for the hospitals of America.

On the other hand, it is possible that we should consider a change, and I have two suggestions to offer. Might it not be more beneficial in the end if there were formed an eastern, a western, a central, a southern, and a Canadian hospital association, each meeting every two years in its own territory? Then let the American Hospital Association meet on the alternate years, and make the membership in the larger association dependent on membership in the smaller bodies. The smaller associations might interest many whom we do not now reach, and, by thus stimulating their interest, result in a considerable increase in the membership of the larger organization. I will not dwell longer on this, for the Committee on the Development of the Association may have something to report along this line.

There is another line of thought which has been much in my mind. This is the era of preventive medicine. Public health work is ever increasing and its scope broadening, and hospitals are each year assuming a more important part in matters relating to the health of the community. Has the time come for the formation of a large American public health association, which would embrace many and varied activities now represented by independent organizations? Would it be possible to enlist in such a movement such associations, for example, as the American Hospital Association, the present American Public Health Association, the National Association for the Study and Prevention of Tuberculosis, the American Sanatorium Association, the American School Hygiene Association, the Canadian Public Health Association, and the National League for Nursing Education? Each association could preserve its identity as a section of the larger organization, and programs could be arranged to represent the work of each section. Would not the opportunity thus afforded of following the work of the different sections have a broadening educational influence on all members? Would it not possibly give impetus to the public health movement? I offer these simply as suggestions for your consideration.

In preparing the program this year, I have been impressed with the fact that we have a large number of

¹This issue of THE MODERN HOSPITAL will be in the mails during the meeting of the American Hospital Association at Philadelphia, and copies will undoubtedly be at the meeting on the last day, September 29. We have the privilege of publishing in this number the president's address and one or two other addresses that will be made as a part of the program. In subsequent numbers other papers will be published, and in the November issue will appear the complete story of the convention.

committees which, according to the by-laws, are expected to report annually. It is my opinion that, notwithstanding the fact that these reports are invariably interesting, it would be better to eliminate some of them and leave the selection of subjects to be presented to the discretion of the president. With this idea in view, I recommend to you that the Committee on Hospital Progress, which includes a Committee on Efficiency, Finances, and Economics, a Committee on Medical Organization and Education, a Committee on the Training of Nurses, a Committee on Out-patient Work, and a Committee on Hospital Accounting, be discontinued, with the possible exception of the Committee on Out-patient Work, but also including the Committee on Legislation and the Committee on the Development of the Association. These committees could be appointed temporarily at any time when the association might see fit. As it is now, the number of committee reports interferes with the preparation of a well-balanced program. An amendment to the by-laws is necessary if this recommendation meets with your approval.

Dr. Howell, in his presidential address, recommended the formation of a Council or House of Delegates for the transaction of business. The need of this becomes more apparent each year. Too much time is occupied in the transaction of business, which could be employed to better advantage for the majority of the members. This matter deserves your consideration.

I wish now to speak briefly of some of the defects in present hospital policy and organization and of some of the problems of the future. The growth of the hospital movement has been phenomenal, and, as might be expected, such rapid growth has developed many weaknesses. It is generally recognized that the modern hospital is a valuable asset to the community. Modern medicine and surgery demand hospital facilities for the successful treatment of many conditions. In every hospital there is developed each year a higher standard, necessitating more and better nursing, more refined methods of diagnosis, more extensive equipment, and a larger medical and surgical service. The function of the hospital is too important to be taken lightly, and it is to be regretted that so many hospitals are established as the result of the ill-advised and uncontrolled enthusiasm of groups of individuals who take a too optimistic view of the financial resources of the institution, or who fail to take that point into consideration at all. The result is too frequently a struggling institution, endowed only with the confidence of the public, which it ill deserves. There should be some machinery for the regulating of such enthusiasm. Hospitals without visible means of support should not be allowed to spring up indiscriminately. That many institutions starting from such beginnings have achieved conspicuous success is true, but the principle is wrong, and the practice unsuccessful as applied to the majority. Too frequently such an institution means another unnecessary burden on the community, diverting funds from other more worthy hospitals, entirely adequate to the community needs.

Another result of this unregulated, mushroomlike growth of hospitals has been the continued low standards of service, due in large measure to the low salaries and wages paid. The salaries paid, from the chief executive down, have been and still are altogether too low in the majority of hospitals, and are not at all comparable to the remuneration for less responsible duties in other lines of work. It is difficult to understand how the trustees of hospitals, usually men of keen business ability, can continue to practice a business policy in the conduct of their hospitals which they would not countenance in private

business. They continue to intrust the business to poorly prepared, untrained executives because they are unwilling to pay for ability, overlooking the fact that a cheap man is usually the most expensive in the end, and the same principle applies to subordinates and employees.

It is not surprising, therefore, that the work is often below par, and that the changes in personnel are so frequent that, but for a few faithful employees, the institutions could not operate. It is also not surprising that the standards of decorum and morals are often so low as to amount to scandal. What else could be expected? For example, it is a well-known fact that until comparatively recently a large percentage of the employees in the municipal hospitals of New York city came from the workhouse on Blackwell's Island.

While on this subject of morals, I wish to say a word more. In discussing recently the organization of a new hospital (which is the hobby of one man) with one of the officials, the latter remarked that Mr. So-and-so did not want the doctors, nurses, and employees to live in the hospital because of the prevalence of immorality under such conditions. We know that such a statement is not true, but the condition does happen just often enough to lend color to such statements. Dr. Washburn, in his presidential address, touched on this point, saying: "Well-authenticated report comes to me that in some hospitals in certain sections of the country the standards of deportment, decorum, and in some instances even decency, are low."

Most of us take hospital work seriously. We believe it to be a serious and responsible undertaking. I am sure you will agree with me that no man or woman of low moral standards has any business in a hospital, particularly in a position of trust and responsibility. It should be our concern as members of this association to see that such persons are never admitted to membership, for the sake not only of the dignity of this association, but of hospitals generally. I may seem to lay undue emphasis on this subject, but it requires only a few isolated instances to cast discredit on the entire hospital system.

Taken by small and large, hospital organization is slowly improving, although the old rotating service still prevails, and the appointments continue to be made for other sources than real merit. I am aware that the problem, particularly in small communities, is a difficult one. The so-called leading physicians and surgeons seem to be necessary to the existence of the hospital. Social prestige is often a potent factor, and the controlling of hospital appointments by a social clique is an evil.

The continuous service is fairly well recognized as much more beneficial to the patients, and much more stable and economical as a working organization. The readjustment along lines recognized to be for the best interest of the patient, which is of course the prime consideration, should take place much more rapidly than at present, and should have the backing of this body. Appointments to staff positions should be guarded more carefully, and merit alone should be the determining factor. A long service as an assistant, or in some subordinate position, should not mean promotion unless that service has been of such merit as to warrant it. In hospital work the best man available, regardless of previous service in that particular hospital, is the man for the place.

While it is true that it costs more each year to operate hospitals, and we often wonder where the money is to come from, nevertheless it must be recognized that modern medicine and surgery demand more thorough methods and more elaborate equipment, and, if the work is to be prop-

erly done, these needs must be supplied. In too many hospitals we find inadequate laboratory facilities and incompetent laboratory workers. The x-ray laboratory, the clinical and pathological laboratories, properly equipped and in the hands of competent workers, are essential to even thorough routine work. More attention needs to be given to these points.

I wish to emphasize the fact that here in American hospitals too little attention has been paid to the importance of autopsy findings. Furthermore, I think the tendency of hospital administrators has been to surround the autopsy privilege with so much red tape and legal procedure as to be somewhat responsible for the small percentage of autopsies in our institutions; that, and failure to provide proper machinery for obtaining such permission, leaving this to inexperienced interns, who are impatient, and sometimes brusque and threatening in their attitude, is a wrong policy. We are just beginning to realize that investigation and education is a legitimate function of the hospital, quite apart from the beneficial effect that it has on the patients under immediate treatment.

Another procedure which has been faulty, and still is in too many hospitals, is the manner in which anesthesia is handled. In the main, anesthesia is administered by those who are inexperienced and often incompetent. The giving of an anesthetic is now recognized as an important, and it may be a dangerous, procedure. To continue to allow this to be done by those who are inexperienced is reprehensible. We should no more allow incompetent anesthetists than we should allow incompetent surgeons to operate.

The hospitals have rendered a great service to humanity, but in the light of our recent knowledge we must acknowledge that they have been conducted more as repair shops in comparison to what is to be the development of the future. We need to study and to understand the broader relationship of the hospital to the community. That we have begun to appreciate this broader usefulness is evidenced by the inauguration of social service work, indicating that we are no longer content to ignore the relationship of the individual to his family, to previous environment, to the community, and to post-hospital environment and opportunities. The pay clinic for people of moderate means, such as has been started at the Massachusetts General Hospital, is also an indication of the growing appreciation of the larger field and the broader relationship of the hospital to the community. In the great public health movement the hospital, with its opportunities for intensive work, with its trained clinicians and investigators, and its many points of contact with the community, occupies an important, indeed a strategic, position. As administrators we must be something more than good stewards—we must be able to interpret correctly the opportunities open to us for a larger usefulness, for a greater public service.

As an association we should try to establish better standards of hospital organization. One of the fundamental weaknesses in our hospitals is the lack of appreciation of the proper relationships between the trustees and the superintendent, and between the superintendent and the staff. Hardly a day passes that I do not receive letters asking me for advice on this subject, and usually they are from harassed superintendents. There should be no such difficulty. It is a well-recognized business principle that any large organization must have a single executive head. In a hospital the superintendent is that executive head, the executive officer of the trustees, and

the authorized means of communication between the trustees and all departments. As such he should have the confidence and backing of the trustees. They should hold him responsible for the management of the institution and should clothe him with all necessary authority. He should be subject to their control, but not to needless interference. He should in reality be an adviser to the board, and should participate in its deliberations, for he is the one man in the whole organization who should be best informed on all details pertaining to the administration of the hospital.

The staff has its function—the care of the patients—but that is not administration. There should not be antagonism between the staff and the superintendent. The staff members should understand that he is not trying to hamper them individually or collectively, but that, because of his impartial position, and because of his broader knowledge of affairs in all departments and of the resources available, he is trying to coordinate individual efforts to form a harmonious and efficient machine. If this were understood, and practiced more generally, the efficiency of our hospitals would be markedly increased. With the many splendid examples of hospital organization available, there is scarcely any excuse for the continued haphazard, friction-producing methods so generally practiced.

I have already referred to the evils of unrestricted hospital growth, but there is another phase which should be mentioned—namely, the need of more attention to the location of hospitals with some reference to community needs. In the larger cities we not infrequently see hospitals of the same type grouped together in certain sections, while other sections of the city are entirely without hospital facilities. It would be just as sensible if the same policy were followed in locating the public schools. The difficulty lies in the fact that the majority of hospitals are private corporations, and there is no one agency, as in the school system, to pass on the question of location. There should be some such agency to correlate hospital development with community needs. This point has been well brought out by Mr. Michael Davis in his article on Health Centers, in which he advocates a hospital, a dispensary, and an open-air school for each 100,000 of the population.

Another point on which there should be more cooperation between the hospitals and the city authorities is the remuneration of the hospitals by the city for the work done. The city authorities should recognize the extent to which the corporate institutions are shouldering the burden of caring for the sick poor, and should be prepared to recompense those institutions at a rate somewhat approaching the actual cost of such service and not by the arbitrary and senseless standards which now prevail, representing, broadly speaking, not more than one-half or one-third of the actual cost.

As an association we should stand firmly for higher standards in the administration of municipal hospitals, and as unalterably opposed to political domination of those institutions. In this country the endowed institutions have been the leaders in hospital development, while, with few exceptions, the municipal hospitals have suffered from the political spoils system, with the result that the municipal hospitals of some of the larger cities, which should have been examples of excellence, have in reality been a disgrace to their respective communities. In this connection I need only mention Chicago, New York, Cincinnati, Baltimore, and Philadelphia. We have had a few conspicuous examples of excellence, but they have been all too few, and there is no reason whatever why our municipal institutions, once freed from the pernicious influence of politics,

could not be models of excellence, contributing largely to medical education and to the increase of medical knowledge, while at the same time exercising a much more potent influence in maintaining the health of the community. If there is any institution which should be entirely divorced from the evils of political domination, it should be the hospitals, which are responsible for the care of the sick poor. This association should stand firmly back of that principle.

In the cities we have been building hospitals larger and larger, until it is no uncommon thing to find hospitals located in the center of the city which can accommodate from 1,000 to 2,000 patients. It seems to me that we should be planning differently for the future. A large central city plant is expensive to build and expensive to operate. We know that, after the acute stages of illness, both medical and surgical patients would do quite as well in less elaborate surroundings; indeed, we know that they could be just as well cared for at less expense, and would be infinitely happier, if they could be moved into the country, to a convalescent hospital. It might not be overstating the fact to say that under such conditions the period of convalescence could be shortened and the end result bettered. The city plant should, of course, be developed to a point of general usefulness as a general hospital, but beyond that point I believe we should look on the country branch as the best means of expansion, rather than to continue to expand into larger and larger city plants. Furthermore, the lack of facilities for placing patients who need continued convalescent care is a problem confronting hospitals everywhere.

If the hospital system is to be thoroughly efficient, more attention must be paid to the physically handicapped, whom we are constantly discharging from our hospitals to lead useless lives, and to return again and again because there is at present no comprehensive plan for placing these individuals in proper environment and for fitting them to lead fairly normal and useful lives. We have some excellent examples both of the need and of the possibilities of such service in Dr. Hall's pottery at Marblehead, in the workshops of the Massachusetts General Hospital and of the Burke Foundation, and many other examples. It is my conviction, however, that this is a larger problem, and is not a question to be solved by individual hospitals for their own patients, because that means needless reduplication—rather, it is a problem of the community. Just as a hospital is a well organized, well equipped unit for doing a specific work, so there is needed in every community of considerable size a well-organized, well-equipped unit or organization for meeting the problem of readjustment—of reeducation of those who are physically handicapped—thereby saving many from the useless, dependent, aimless existence to which they are now condemned on account of the lack of some such system. We should be able to learn much from the manner in which this problem is met in England, France, and Germany after the war. On a smaller scale the same problem has been and will continue to be with us, and it must be solved.

Hospitals were originally designed for the care of the indigent alone, and were looked on as the place of last resort. With the improved and refined methods of diagnosis and treatment, the more elaborate technic of both medicine and surgery, the hospital is now recognized as the place of first resort for those who are seriously ill. We must, therefore, realize that in the hospital of the future, if it is to be complete and prepared for its broadest usefulness, more attention must be paid to furnishing accommodations for all classes. It is true that American

hospitals have been developing along these lines, but it should be emphasized in its importance, else those institutions which provide only for the poor will be in the position of discriminating against the man who can pay, and we shall find the private hospital and the nursing home flourishing as they do elsewhere. Without unduly criticising these institutions, it must be recognized that they cannot afford the advantages of the large general hospital, with its complete organization and extensive equipment. Sir William Osler has said that one of the great weaknesses of English hospitals is the lack of proper provision by general hospitals for the well-to-do as well as for the poor.

Furthermore, one of the greatest needs today is a hospital service for the large middle class, if I may use that term—those who, while unable to afford the usual expensive private service, and are too proud to accept the charity and the publicity of the open ward, are willing and able to pay for a service somewhere between these extremes. How is this to be provided? It is manifestly not a proper tax on the funds given for the poor, and it cannot be considered the duty of the city or the state to provide such a service, the only reason for which is the pride of the individual, although it is a pride to be encouraged. This service must be so regulated as to be self-supporting, or else it must be provided for by special endowment. This is an important question, and we are expected to answer it.

Another problem which I hesitate to mention, but which is so important that it cannot be passed by, is the matter of the training of nurses. We must all recognize that the trained nurse is today called on to play an ever-increasing part in our civic and social life, and that, as a factor in all public health work, her importance can hardly be overestimated. My only plea is for more general recognition on the part of hospitals that the training school for nurses can no longer be regarded as simply a means to an end in the business of the hospital, but that the hospital has a distinct duty to perform in the education of nurses, that it is a part of the educational function of the hospital, and represents a great public service.

In a recent address to the nurses of the Johns Hopkins Hospital, Dr. William H. Welch expressed himself in words of great import, saying in part:

"The training school of the hospital supplies the needs of the hospital in the most efficient and economical way possible, but the query may be raised as to whether the complete meeting of that demand of the hospital is in every way commensurate with the meeting of the full needs of the training schools. I do not for a moment suggest that the training school shall not meet the needs of the hospital. That, of course, is the best part of the training of the nurse, but perhaps the hospitals should look on it as not merely an arrangement by which the nursing needs of the hospital can be supplied, but as an opportunity to train women for a very important profession.

"I think the time has come to make a very urgent plea for the adequate endowment, on the educational side, of the training school for nurses, for adequate physical equipment and an adequate educational staff, and that the nurse shall have the requisite time, not only for studying and attending lectures, but for reading; because practical training in nursing, as practical training in everything else, is, after all, one-sided, and it rests on certain fundamental principles, and these principles must be taught, just the same as in the training for any other technical profession. One is deeply handicapped without the knowledge of the fundamental principles which underlie the practice of any profession.

"I should like to see this idea of the need of recognizing the profession of nursing on the educational side as a worthy object of philanthropic endowment presented side by side with the needs of medical education.

"I have already emphasized my feeling for trained nursing as a profession, and as a profession distinct from that of the practitioner of medicine. Intertwined with it, of course, but I am sure it is important for the doctor to realize that there are things which the trained

nurse knows better, and he should recognize that the nurse is an expert in a profession which, while intertwined with that of medicine, is distinct from it. It is not to be thought of as simply subservient to the profession of the practice of medicine. It stands by its side."

As an association we have had this subject under consideration in one form or another for several years. Your special committee reports this year; it has gone deeply into the subject, and will present to you a carefully prepared report which merits your earnest consideration.

The out-patient department, or dispensary, has received much attention in recent years, and it deserves and is bound to receive more in the future. It is a much more important phase of hospital work than has been generally understood. We have looked on it too often as a mere side issue, where a place could be found for those for whom nothing else was available. We have heard much about dispensary abuse, meaning the abuse of the privilege by unworthy patients, but we have heard too little about the abuse of the patient by the dispensary, meaning by that the waste of the patient's time and careless and superficial advice and treatment. This service is of sufficient importance to demand the highest grade of work; else it should be discontinued, for our hospitals in the future will be judged quite as much by the grade of service rendered in this department as in the wards.

Here, again, there is urgent need for provision for that great class of self-respecting, self-supporting individuals who are ready and willing to pay for expert service if it is placed within their means. But in this day of specialization, when to get a competent opinion means to pass through the hands of three or four specialists, they are unable to meet the expense. To satisfy this need, there should be pay clinics for these people of moderate means, entirely distinct and separate from the so-called free dispensary, where a competent opinion can be had from as many specialists as may be necessary, at a moderate, inclusive fee. The Massachusetts General Hospital, so often a pioneer, has again led the way in this respect, and the experiment should be carefully noted by us all.

A hospital exists to serve the public, and, if our hospitals are to play their full part, more attention must be paid to the establishment of clinics for venereal diseases. This applies both to the in- and out-patient service. I need not do more than call attention to the fact that the hospital has a great opportunity in such clinics for broader service, not only to those who suffer from these diseases, but to the public at large, in preventing the spread of venereal disease by therapeutics and by education.

What should be the attitude of the hospital toward the illegitimate child and its mother? Dr. George Walker, chairman of the so-called Vice Commission in Maryland, called to my attention the fact that not only were physicians willing to sanction and often to arrange for the prompt separation of the illegitimate child from its mother, immediately after birth, and to place it in a foundling asylum, but that hospitals quite frequently were willing parties to such an arrangement, some even providing a woman who had the specific duty of making such arrangements. I think we may assume that Maryland is not alone in this. Dr. Walker also points out that the mortality in foundling asylums is generally high—in many as high as 90 percent. In consideration of this fact and of the moral principle involved, I believe that no hospital should countenance the separation of the child and its mother for such purposes. We all know that many times, when the mother has no desire to keep the child at first, if made to do so for a short time, she would not part with it for any consideration. I believe this practice, which I have

called to your attention, should be frowned on by this association. In my opinion it should be made an offense under the law, as it is now in Maryland.

We have now accustomed ourselves, or are doing so, to the employers' liability acts, as they affect our hospitals. Health insurance and the effect of the same on hospitals is another problem which we shall be forced to consider. Health insurance is doubtless in the minds of most of us a thing to be desired. In any event, it will surely be with us before many years. The American Association for Labor Legislation is actively engaged in promoting this movement, and I believe this association should appoint a committee at this session to study the subject to the end that, as a body, we may be better informed on the question, and, if that should be our judgment, to cooperate in all efforts to bring it to pass.

In conclusion I desire to thank the association for the honor which it has paid me in selecting me as its president. It is not an honor which one seeks, but as an expression of your confidence and trust it is deeply appreciated. I have tried to prepare for you an interesting program, and I sincerely hope that this, the eighteenth conference of the American Hospital Association, may be truly helpful and entirely harmonious.

I wish also to thank the other officers of the association and the various committees for their loyal and wholehearted support and cooperation. If the meeting shall prove a successful and profitable one, as I am sure it will, the credit will be due to them, and in large measure to the local committee.

I thank you for your patience and your consideration.

Disinfection and Other Practicable Methods of Preventing the Spread of Infection in Hospitals¹

BY ROBERT J. WILSON, M. D.,
New York.

Before beginning to consider the methods practicable for preventing spread of infection, let us consider the conditions that influence it.

There are two factors indispensable to infection—the susceptible individual and the specific organism that causes any particular kind of disease. It is only under favorable conditions for each factor that infection takes place. The candidate for infection must be susceptible, and I take it that there are degrees of susceptibility depending on the amount of antibody or resisting material of whatever kind there may be in his or her body. Some may take issue with the statement that there are degrees of immunity. This question may be met by showing that the actual amount of diphtheria antitoxin in the circulating blood of human beings has been frequently determined and is found to vary considerably. It is therefore fair to assume that the same variability of immune substance may hold for scarlet fever and other highly communicable diseases. Those who are intimately associated with contagious diseases know how much more prone to contract disease are those who are in a weak and debilitated condition or convalescent from another infection than the strong and robust. This is readily understood when it is known that antibodies are rapidly used up in combating an infection, and a certain time must be allowed for their reappearance in the blood after an acute infection. This also means that convalescents in hospitals are more susceptible, through loss of antibodies, than are healthy individuals when exposed to infection under conditions otherwise similar. The

¹Read before eighteenth annual conference of the American Hospital Association, Philadelphia, September 26-29, 1916.

other factor of the infecting organism's ability to produce infection in a susceptible person will depend on its virulence—the number of organisms that reach the susceptible, their ability to withstand exposure to sunlight, drying, and other deleterious conditions that surround them before coming in contact with the susceptible.

The term practicable is used in this paper "because it is sufficient to denominate the way practicable, for we esteem that to be such which in the trial oftener succeeds than misses." Disinfection, to the mind of the writer, is only indicated in those cases that have, after termination, left in the premises infectious organisms capable of infecting susceptible individuals. In other words, disinfection is indicated only in cases of known infectious areas. Practically, we can consider such to be those where termination of disease in the premises has been by death or removal to other quarters, and where it is desired to use the vacated area immediately. Air dilution, drying, cleaning operations, all rapidly combine to rid the infected area of living organisms, so that the use of disinfectants where such forces have been at work is like locking a stable after the horse has been stolen.

In hospitals where infection of a virulent type breaks out in a ward or room that it is necessary to use immediately after the removal of the infectious disease, disinfection is clearly indicated, and its performance should be properly carried out. It is well to consider disinfection a chemical operation, where, under favorable conditions of heat and moisture, one chemical—the disinfectant—combines with another chemical—the albuminous body of the organism—(these two being destroyed as such in the operation) to form an entirely new inert chemical, the results of the combining substances. As an example, the disinfectant, bichloride of mercury, combining with the organism, albumen, results in the formation of albuminate of mercury, and, if it can be conceived that the combining substances are in the exact amount to satisfy, there is no longer any bichloride of mercury, no longer any organism, but a new and, so far as infection is concerned, inert substance. As much care should be used to insure the union of the substances in the operation of disinfection as would be observed in any chemical experiment in a laboratory where exact results are hoped for; anything less than this is a confession of ignorance, and the result is apt to be what ignorance usually brings forth—failure.

Having set forth what we believe to be the principles of disinfection, let us consider its practical demonstration in the sterilization of infected areas. The first thing to determine is the choice of disinfectant; this will be indicated by the kind of organism to be destroyed. If bacteria alone are to be considered, formaldehyde gas is the disinfectant par excellence. If, on the other hand, we must consider not only bacteria, but their insect living hosts—as the mosquito, the louse, the fly, and the flea—then we must use an agent that combines the qualities of disinfectant and insecticide, and here we find sulphur dioxide liberated in the presence of steam or a very humid atmosphere of the best service.

Having chosen a disinfectant, the preparation of the area for its liberation and the amount to be used and the method of generation must be decided. For practical purposes it will be found that sulphur in the amount of 4 pounds for every 1,000 cubic feet of air space and 40-percent formaldehyde solution, 10 ounces for every 1,000 cubic feet of air space, will, under proper methods of generation, liberate sufficient amount of disinfectant gas to destroy organisms in any part of the area if the time of exposure has been long enough to insure the combination

of the chemical with the organism. With sulphur it requires an exposure of eight hours from the beginning of the process, and with formaldehyde an exposure of six hours, to insure disinfection.

An ordinary disinfection would be performed in this manner: The room or ward to be disinfected would be carefully measured and its cubic area determined. All cracks, crevices, and openings of every kind would be closed by pasting paper over them, so as to make the room as near gas-tight as possible. If sulphur were chosen as the disinfectant, finely cracked brimstone in the proportion given above would be placed in an iron pan or pot, and this sulphur receptacle placed on a brick in a dish pan containing water 2 inches in depth, the dish pan to be placed on a number of bricks on the floor to insure protection against fire. The water in the dish pan serves the double purpose of protection against fire and the source of moisture necessary to disinfection with this agent, sulphuric or sulphurous acid, not sulphur dioxide, being the bactericide. To start the sulphur burning, a little of it on the top and in the center of the pan is made finely granular and a little wood alcohol poured on it and ignited. This method would be used to rid premises of bed bugs and other insects as well as bacteria.

If formaldehyde were to be chosen as the disinfectant, it could be generated in the following manner, using the amount for each 1,000 cubic feet as mentioned above. Immediately before using, add 1 ounce of commercial sulphuric acid to 10 ounces of 40-percent formaldehyde solution, and pour this mixture on 1 pound of unslacked lime. There will be an immediate evolution of formaldehyde gas. Care must be used in using the sulphuric acid, as its careless handling may result in a serious burn.

Following the use of a fumigant, the room should be thoroughly aired, and door knobs and woodwork that it is believed may have been infected and left dirty should be thoroughly washed with soap and soda solution—1 ounce of common soda added to 13 quarts of hot soap suds (soft soap and water).

This great amount of space has been given to disinfection because it should be used when indicated, although it is less practicable than some other methods for preventing the spread of infection.

With our present knowledge there are many things we can do—indeed, have been doing for many years—that will more surely control infection than the use of disinfectants. We assume, and these are assumptions without proof, but with much circumstantial evidence to support them, that certain of the exanthema liberate their infectious organisms at a certain time in the disease and through certain channels. For example, in measles in the first days in the disease, in the catarrhal stages, the organisms come from the inflamed mucous membranes of the upper air passages; in scarlet fever, in the first weeks of the disease the organisms come from the inflamed mucous membrane of the tonsils and upper air passages, or from discharges incident to the disease; diphtheria, we know, is usually a disease where the organisms are confined to the throat and nasal mucous membranes, and is infectious as long as the organisms remain in the throat. These three are illustrative of all diseases whose spread we must combat in our hospital work.

By far the most important factor, and the one that most statisticians ignore, that prevents the spread of infection is the immunity of the exposed. A history of having had the exanthemata in persons who have been exposed in hospital wards is sufficient to consider them immune, and we need not worry about their contracting the disease.

Where a history of immunity cannot be established in exposed persons, we must, a day or two before the end of the period of incubation of the disease after exposure, put the exposed patients to bed and be extremely careful to carry out the so-called barrier system first recommended by Dr. J. Lewis Smith in his excellent work on *Children's Diseases*, 1887. Nurses, attendants, and food that have come in contact with one of these cases must not come in contact with any other case until rendered sterile.

The surest way of reducing bacteria to small numbers in a laboratory is by dilution, and the same thing holds good in a hospital ward. The free and frequent use of soap and water will be more efficient than the improper use of hand disinfection. Hand disinfection, however, should not be discarded because its careless use by some discredits it. On the other hand, it is the duty of those who must control infection to instruct, and to compel their subordinates to use all the technic of personal hygiene necessary to the protection of those intrusted to their care against any and all kinds of infection.

There has been a tendency of late years to discard the use of caps and gowns in contagious disease wards unless in actual contact with the cases. To my mind this is a dangerous procedure and is like playing with fire, except that any burning through failure to use caps and gowns falls on an innocent and unprotected third party, who pays the penalty of some other person's ignorance—not his own.

It may be laid down as a cardinal principle that, once a highly communicable disease is discovered in a ward, this ward, its inmates, attendants, and equipment are to be considered and operated as an isolation service would be in a contagious disease hospital. The practical rules for such a service would be: All attendants of every character before entering the infected area should be divested of their ordinary outer garments, or have them protected by suitable covering garments, preferably suitable gowns that entirely cover them. The hair, a notorious dust gatherer, and therefore bacteria gatherer, should be protected by a suitable cap. Before leaving the infected area, attendants should be divested of their exposed clothing, and the hands, and face if contact has been very intimate, should be thoroughly washed and irrigated with water and a disinfectant hand solution used. If the disease is a highly communicable one, such as smallpox, it may be desirable to confine the efforts of all attendants, including medical, to this one service.

Nurses who do the bedside nursing should not perform any other nursing duty while detailed to one infection. Cleaners should not be allowed to come in contact with the patient, and should be under close supervision in their work and compelled to observe the same personal hygiene laid down for all attendants. Equipment of every kind must remain in the infected area until sterilized or quarantine is lifted. No food or food containers or dishes are to be returned to the kitchen. Soiled and infected clothing and linen is to be made sterile before taken to the general laundry. If the disease is terminated by quarantine, it is not necessary to disinfect; if it is terminated by death or the case is removed to other premises, the area must be disinfected.

The writer has not changed the opinion voiced before this association eight years ago at Toronto that he believes contagious diseases can be treated in general hospitals, and that the other patients can be properly safeguarded against infection. Every year adds to our knowledge new measures of protection against the spread of infection. No hospital has fulfilled its obligations to its patients and

employees unless it has used every practical scientific procedure to protect them against infection. With a full knowledge of their importance, failure to have all food handlers subjected to the Wassermann, the Widal, and the Schick tests, if not criminal negligence, at least shows a close approach to moral turpitude.

In this paper there have been enumerated certain measures which, if properly used, ought to control the spread of infection, but, without knowledge of the disease to be controlled, all of these will be without avail. The precept that "knowledge is power" was never more applicable than in the treatment of contagious diseases.

Grading and Classification of Nurses

COMMITTEE OF AMERICAN HOSPITAL ASSOCIATION PUBLISHES
STUDY AND RECOMMENDATIONS TO BE MADE
AT PHILADELPHIA

The standing committee of the American Hospital Association on Standardization and Grading of Nurses has completed and printed its report to be submitted to the Philadelphia meeting. The report covers about 12,000 words, and hence is too long for publication in a periodical such as *THE MODERN HOSPITAL*, but some of the salient points in the report can be given.

The report is a valuable contribution to nursing and hospital literature. It goes more constructively into the problems that are facing the United States and Canada today in the nursing field than such reports usually do, and the committee has at last justified its existence by its survey of the situation and by some very worth-while recommendations.

The report, boiled down, finds some things existing in the nursing field that are not right; for instance, it finds that there are too many surgical nurses and not enough nurses with general training; it finds that there are too many trained nurses of all sorts in private practice who are "registered against" the acute communicable diseases; it finds that too few nurses are being trained for actual care of the sick in the homes, especially in homes that cannot afford to pay trained nurse fees; it finds that there are too many practical nurses, or attendants, without adequate hospital training, who are being pressed into service to care for critical cases that require a high degree of technical skill, and on this point it finds also that there are many medical men who are introducing such nurses into the homes of their patients as trained nurses.

The committee finds that too much stress is being laid, in small communities and in some state legislation, on the number of beds that shall justify the conduct of a training school, while too little attention is paid to the character of training that is given in these small hospitals.

The committee also finds that specialties in nursing are not being given proper recognition in nurse training, such, for instance, as tuberculosis nursing, mental nursing, maternity nursing, and the nursing of chronic diseases, and more especially the nursing of the acute communicable diseases.

The committee pays some attention to an experiment that has been going on in Detroit during the past two years, whose object is the development of home nursing of people in moderate circumstances. The committee finds that many practical nurses who have offered themselves in connection with that experiment were women without moral stamina, that many of them were rejected probationers, and that a good many of them were at the time of their applications doing private nursing, and that they were representing themselves as graduate nurses. After

experience with a good many of these women, it was found that they were a shiftless, improvident, careless class, many of whom followed many occupations in the course of the year and only a few of whom faced the field with a sincere purpose to prepare themselves for work in a legitimate field and with the intention to continue in it. It found also that, after a good many of these women had been given a certain amount of training in homes under adequate supervision, they were unwilling to do the things most needed to be done—viz., to help with the housekeeping and with the well children in addition to caring for the sick.

RECOMMENDATIONS

The committee made a good many recommendations and offers carefully thought out arguments on a good many mooted points.

The committee recommends that special hospitals—especially tuberculosis, acute infectious disease, mental disease, and chronic disease institutions—rearrange their administration so that they can put in training schools to give special attention to that particular class of diseases in which the institution is engaged; but the committee recommends strongly that these special training schools should, by some process of affiliation, give a general training of at least a year in addition to the special training. The committee finds that sufficient special training is given in general hospitals in eye, ear, and orthopedic cases, and that such institutions do not need to install training schools.

The committee recommends that a special study be instituted in each state in this country and in the provinces of Canada with a view to creating homogeneity and a certain reciprocity and affiliation between the institutions in the state or province, and it recommends further on this point that, wherever possible, pupils should be compelled to complete their training in the institution, and more especially in the state in which it began, in order that a certain amount of responsibility might be fixed and the state treated as a whole in its relations to the nursing world generally; and as a part of this plan it believes in complete reciprocity between the states and provinces.

In its study of conditions the committee found that there were two classes of people who specially needed other nursing facilities than those now afforded—viz., people who could afford to pay, for short periods at least, for a nurse whose fees would not exceed \$15—these people the committee thought had incomes around \$30 a week; and a second class of people who could not pay more than \$5 to \$7. For the first of these classes the committee thought a good organization in the community, with competent supervision and the available partly trained local material, could take care of the problem, but the committee recommends that for the second group some form of sickness insurance would have to be evolved.

The committee laid particular stress on the need of community nursing centers in which the best available class of women could be partly trained to meet local needs, and the committee suggested the following heads under which this partial training could be given:

SUGGESTIONS FOR CLASS INSTRUCTION¹

In response to several requests for some guidance as to the instruction which should be given to household nurses or attendants, the committee submits the following outline:

¹It is suggested that practical demonstration of correct sickroom methods be included, whenever possible, in every lesson in classroom and at the bedside.

Etiquette and ethics of the sickroom. Germ theory and principles of asepsis. Methods of sterilization and disinfection of every-day sickroom utensils. Household hygiene and management of sickroom. Personal hygiene with special reference to avoidance of infection. Care of bed, bed-making, bed-sores, etc. Making the best of household materials in sickness. Personal every-day care of sick. Special methods of promoting the patient's comfort. Feeding the sick. Invalid cookery. Temperature, pulse, and respiration. Observation of patients and note-taking. Baths, cleansing, and to reduce fever. Home treatment—packs, hot and cold; enemata; douches; poultices; cold compresses; hot fomentations; sweat baths; care of ice caps, hot water bottles, etc. The giving of medicines. Ordinary care and feeding of infants. Ordinary care of sick children. Common household disinfectants—how to make and use them; precautions. Practical points on dealing with communicable diseases in the home. Bandaging. Household emergencies and minor wounds. Ordinary maternity nursing. Special medical cases and care of chronic invalids.

PERSONAL REQUIREMENTS

A certificate of health; high moral character; sufficient education to read and write and keep intelligent notes of cases; recommendations from not less than two responsible citizens (not relatives), one of whom shall be a clergyman.

The Hospital's Obligation to Every Patient Who Enters the Institution¹

BY JOHN T. BOTTOMLEY, M. D., F. A. C. S., Boston, Mass.

It should be self-evident that every hospital from the very moment of the opening of its doors and the reception of its first patient assumes an obligation and a responsibility which must be discharged conscientiously, or the hospital fails to a greater or less degree in the performance of its full duty. A hospital, it is true, has other obligations than those relating solely to patients, but nevertheless the suitable care of patients represents its highest obligation and its most important duty, and it is with my idea of the proper fulfillment of this duty that this brief paper has to do.

I realize that I have undertaken a difficult, and probably a thankless, task, and that I am touching a subject on which the hospital executive may have one opinion, the hospital professionally another opinion, and as to which even the patient may dare to hold views. But there should be and is some fundamental rule of conduct with regard to which the minds of all may come to at least approximate agreement.

By way of preamble, let me say that I yield to no one in my admiration of the splendid work that has been done and the magnificent example of Christian charity that has been given by our Catholic hospitals and the devoted religious who conduct them. No one realizes more fully than I the noble sacrifice of self and the unstinted personal service on the part of these holy women who have alone overcome almost insurmountable obstacles and made these monumental works possible. With the greatest reverence and with the most sincere respect, I salute them.

Yet our best friends are not always those who do naught but praise us; the corrective word of friendly criticism, though it stings at the time, may in the end be the most salutary. And I beg you to remember that any

¹Read at the meeting of the Catholic Hospital Association, Milwaukee, June 7-9, 1916.

word of criticism that I may sound comes from a friendly heart, and is meant to be constructive and not destructive.

Now, hospital machinery comes in contact with the individual patient in many ways—through the executive staff, through the visiting staff, through the house staff, through the nurses, and through the hospital equipment, animate and inanimate. Each point of contact entails reciprocal obligations, and it is into the hospital's share of these that we are to make inquiry.

EXECUTIVE STAFF

We have come to the day when the superintendency of a hospital is almost a profession in itself, when a man or woman (and I believe that the position should, when at all possible, be filled by a man) who is chosen as a superintendent should be selected because of peculiar fitness for the place, and in addition to that because of special training for the place. The money collected for a hospital, the funds donated for hospital purposes, belong by every right to the patients, present and prospective, and these funds must not be unwisely expended either in unskilled planning, in ill-advised repairs, in duplicated or unnecessary appointments, in wasted space, in unbusinesslike buying of supplies, in waste of material, in useless decorations, or in any one of a hundred other possible ways. In other words, the money should be expended by or at least with the advice of an expert superintendent, not only before and during the building of a hospital, but just as necessarily after the wards are open and the patients have come. This is a matter of which I hesitate to speak at length here, but I feel strongly that the executive management of many of our Catholic hospitals can be greatly improved. As a rule, the superintendent should be a man versed in the principles at least of modern medicine, for it is usually only such a man who can grasp adequately the many-sided problems that must come up for consideration and decision in hospital management, and consequently only such a man who can cooperate intelligently and fully with the professional staff. The matter of expense, I know, often stands in the way of securing a competent person.

In point of time, the first direct obligation of the hospital to a patient is a kindly reception, and an adequate office force that will give to his family and immediate friends proper information of the patient in a pleasant way. I need not, I am sure, dilate on the need of a kindly reception for the patient. The lack of it in present-day institutions is by no means uncommon, and leads to early and growing complaint and dissatisfaction. Its need has long been known. In olden days in the French Hospital at Angers the hospital statutes demanded that the prioress herself should go without delay to receive a patient, or should send one of the sisters for that purpose, "not severe or hard, but kind of countenance" (J. J. Walsh: *The Popes and Science*, 1908, page 259). I am not sure that such a statute would be amiss today in many of our institutions. I present the thought for your consideration. Let not our charity wear a stony face. Do not receive the patient as if he were an undesirable alien. A kindly reception, amiability in countenance and manner, is a long step in the direction of getting the patient's good-will and cooperation. Consideration of the patient's family and friends leads far in the same direction. A friendly public feeling is not to be despised by any hospital. I know that it is a difficult matter to handle kindly some patients and the friends of some patients, but a small investment of tact and courtesy usually brings a large return in many acceptable ways.

I shall only mention, in passing, the need of a prompt, courteous, intelligent information service in the hospital office. Why so many hospitals are so negligent in this regard passes my understanding. Inefficient information service, which is the rule rather than the exception in our hospitals, is a very expensive item in the conduct of an institution, and I am not familiar with any better method of acquiring the ill-will and resentment of the public. Proper service is, in my opinion, a matter of apparent expense, but of real economy.

VISITING STAFF

The patient, once admitted, has a right to expect the attention of a conscientiously selected staff, the members of which shall work together in unselfish cooperation. The obligation for the conscientious selection of such a body rests on the hospital. In many of our Catholic hospitals in the past the selection of the personnel of the staff has been justly open to much unfavorable criticism. No man should be appointed to a hospital staff simply and solely because he has a large practice, or is a friend of this or that sister superior, or of this or that cleric, or of this or that politician. Any hospital board that appoints men to its professional staff solely on any of these grounds fails immediately in its highest duty—the adequate care and the greatest good of the patient. That such appointments have been made, there can be no question; that such appointments have resulted in all sorts of professional errors, both of omission and commission, is certain; that this practice must cease, if we are going to advance as rapidly and as far as we should, is quite as certain. A man should not be appointed to a professional position because he is Catholic or Protestant, English or Irish, your friend or my friend, but only because he has the brains, the training, and the disposition to give honest, efficient, unselfish service to the sick intrusted to his care. I realize the handicap under which Catholic hospitals and Catholic physicians have labored in some localities in the past; I realize the partial justice of the claim that Catholic hospitals should have at least a just proportion of Catholic physicians in attendance, and, other things being equal, that a proportion of the physicians should be Catholics. But we must see to it that we make the other things equal—we must train for the work, we must put our brains into it, we must be prepared to sacrifice ourselves and our pleasure for it, and no one should expect a staff appointment simply and solely because he belongs to this or that church, or is a friend of this or that man or woman, and for no other adequate reason. On the other hand, granted that he has the brains, the training, and the disposition, the fact that he is of this or that faith, or has friends in this or that quarter, should certainly not weigh against him.

I am strongly in favor of the system under which one man is made chief of a service (medical, surgical, orthopedic, etc., as the case may be), is on continuous duty, and is held responsible for the conduct of his service. He is to recommend to the executive board for staff appointments under him such assistants as he wants, he is to map out their work for them, he is to see that this work is properly done, and he is to be held responsible to the executive board for the satisfactory care of the patients in his wards. In contrast with the system that appoints many men to a service for relatively short periods of time, the one-man system makes for uniformity, and consequently economy of conduct and for, I believe, far better service to patients, because it tends to the development of a very few good men instead of many only mediocre men.

I believe that executive boards should give a staff every aid that a wise administration of the finances will permit, and should demand in return from the staff honest, efficient, cooperative, productive service. The hospital, through its staff, also owes it to the patient that a careful record of his medical history should be made, preserved, and so catalogued that it may be easily found and used for the good, not only of the patient directly concerned now, but also for that of patients in prospective. Through the staff, too, the hospital must seek to gain the willing cooperation of the patient in his treatment. I believe that patients should be regarded as intelligent human beings, and that such phases of the diagnosis and proposed treatment of their condition as they may reasonably and safely know should be placed before them for their consideration and judgment. A better mutual understanding will result with added benefit to both the institution and the individual.

INTERNS

In the choice of men for internship, favoritism should play no part. An intern is altogether too important a spoke in the hospital wheel to permit of his being chosen in any other than a most conscientious way. It is no place for the youth with the mind of a boy, to whom an internship means only one or two years more added to his loafing, nonresponsible period. An internship, I believe, is the most important time, in a formative way, of the young physician's whole medical life. It should be filled only by youths who are serious in their pursuit of professional knowledge and training, and who realize that they are being offered the most precious boon that can be given to any student of medicine. The examination, as a method of choice for appointments, is far from satisfactory; a practical is better than a written, and both are faulty. Personally, I like to talk to applicants, and to scan closely not only their school standing in studies, but their general conduct. I want to know also the feeling of teachers regarding them as individuals. I would far rather have a man of distinctly mediocre ability who regards his position and his work seriously than a brilliant youth who regards it lightly. I do not consider the choice of suitable interns as anything more than an indirect obligation of the hospital executively; it is, on the other hand, a direct obligation of the professional staff, on which rests the equally important duty of training these interns adequately. They should be taught to care for the individual patient, to take proper clinical histories (perhaps the most important and surely the least appreciated part of their training), to make the ordinary physical, chemical, and physiological tests, and finally to acquire the gentle art of handling patients tactfully and of securing their cooperation.

NURSING STAFF

It goes without saying that the hospital has the obligation of providing for the patient a nursing force adequate in number, physical condition, and training. The nursing problem in hospitals offers a wide field for discussion. Though it is often difficult for a training school to get a sufficient number of suitable applicants, yet I believe that applicants should be investigated thoroughly. The possession of all the qualities of mind and body necessary for the making of a good nurse is not given to every woman, and for that reason the hospital should study applicants closely. The decision as to their suitability should be made either immediately when the candidate applies or after a period of probation, which, though brief, should be long enough to allow a just weeding out of the unfit. Paragons are not to be expected, but there must

be some minimum degree of possession of certain qualities below which the hospital may not go in its choice. It is chiefly to determine the possession or want of this minimum that the probationary period is established, and a probationer should be watched most carefully. At the end of her probationary period, if there is any doubt as to her suitability, she should be dismissed at once. Justice to the applicant, to the patient, and to the hospital demands this. It is entirely unfair to allow a young woman to go far in her training and then to dismiss her for anything except the gravest breach of rules. Once a nurse is accepted, the hospital must see to it that she has teachers fit to instruct her in her work, and that she is fed and housed in such a way that she will be physically conditioned for the hard work she must do. There should be, first of all, a capable trained superintendent of nurses—a woman who knows her business, and who can both direct and teach others intelligently. Only such candidates as have demonstrated suitable personal and mental qualifications should be allowed to advance from the period of probation into the nursing school proper. These pupil nurses, once accepted, may in all justice expect of the hospital a good, common-sense training in the profession of nursing. I lay stress on the phrase, "a good, common-sense training." I do not mean what may be termed an overtraining. I am strongly in favor of grounding the pupil nurse thoroughly in the essentials of her work, of training her to be observant, of emphasizing to her the importance of detail, of imparting to her the technic of the actual care of the patients, and of impressing on her the necessity of being kindly and humane. Some elementary facts of hygiene, of the action of drugs, of anatomy and bacteriology, the pupil nurse should have presented to her in such a way that she will grasp the relation of these facts to her daily work. But she should not be overtrained along this line; she should not be given too much bacteriology, too much pathology, too much physiology, too much anatomy. At best, nurses can acquire but little knowledge of these subjects; at best, much knowledge of them can be of but little practical avail to the average nurse, and, most important of all, there is no field where more danger lies in a little knowledge. The nurse should not be trained to take the place of the physician, but should be schooled only to aid him. We are tending, I believe, too far in the direction of overeducating the average nurse in a general way, and of undereducating her in ways that are more specific, more useful, and more practical. Knowledge of how to make a sufferer comfortable, of how to manage a kitchen, of how to prepare and serve nourishment in an attractive way, how to order household supplies, how to arrange and keep clean a room, and, if I may use a homely term, how to "mother" a patient and make him comfortable, is far more important practically than a knowledge of the theory of the origin of tumors, of the microscopic appearance of bacteria, of the surgery of the stomach, of the attachment of muscles, of urinalysis, etc. In other words, do not carry too far the strictly professional side of the training; take some of the often misspent time and teach properly selected nurses with good dispositions and kindly manners to be compassionate, and to remember always that their patients are not well, normal-acting, normal-feeling people, but sick, and, because they are sick, often ill-acting, ill-feeling people, who are to be both judged and treated sympathetically. If the hospital can succeed in thus impressing its nurses, a goodly portion of the obligation to the patient has been discharged.

Furthermore, not only should the hospital furnish com-

petent, kindly nurses, but it should furnish them in sufficient numbers. Having too few nurses means not only inadequate care of the patients, but overworked, tired-out nurses, and a further crippling of the nursing service. The hospital, moreover, owes it to the patients that these nurses are properly fed, properly shod, and properly instructed in the conservation of their own health. All this makes for progress in the direction of nursing efficiency and hospital economy in its true sense. I have in mind now an institution where the number of nurses is too few, and where the nurses are improperly and insufficiently fed. When the attention of the superintendent was called to this fact, the necessity of economy was advanced as a reason for its existence. Such economy is by no means true economy, but in every way false economy, as was distinctly indicated by the morbidity rate in this nursing school.

How little we hear of nursing efficiency and how great the need of hearing about it! I wonder how many superintendents of nurses and how many head nurses have ever read Dr. W. Gilman Thompson's illuminating practical article on "Efficiency in Nursing" in the *Journal of the American Medical Association* of December 13, 1913. "Does anyone know how many unnecessary steps the ward nurse takes or how often she unnecessarily bends her back or lifts heavy weights?" he asks, and then continues to cite a few striking examples of inefficiency in ward nursing that have fallen within his own experience. Does anyone think how often the comfort of patients may be sacrificed that the ward appearance may be uniform and neat? Have you any definite idea of how much valuable time is wasted because a nurse is not only allowed, but sometimes made, to work without any intelligent direction of her work by those who are paid to give it intelligent direction? I ask every superintendent of training schools here present to read Dr. Thompson's article, and then to go into her hospital ward and see wherein she can work reforms in the direction of greater comfort for the patients, more conservation of the nurses' energy, and greater efficiency in her nurses' work. I do not think that patients should be coddled. Good care is not synonymous with coddling. The one is an obligation of the hospital to the patient; the other has no part in it.

HOSPITAL EQUIPMENT

There are certain essentials in equipment which every hospital should have. The nonessentials, while they may be most desirable and convenient, are not necessary to the adequate care of the patients, and the degree of their possession must be determined by the financial condition of an institution. The machinery necessary for the proper preparation and attractive serving of good food and that required for the maintenance of cleanliness in every department of the hospital is indispensable.

I am under the impression that one of the most common complaints of patients against hospitals is on the score of food and of its service. The question of providing suitable food in an economic way is an important one. Efficiency in this regard, though costly at first, in the end spells economy. One essential in the solution of the problem is an executive department that, through a trained superintendent, uses skillful methods in buying food products, that is willing to install a modern culinary plant, that will so arrange dumbwaiters and other means of transporting the cooked food, diet kitchens in their geographical relations to the wards, etc., that food may reach the patient before it has become cold and unpalatable; an executive department that will see wisdom in the employ-

ment of a first-class chef who shall overlook the actual preparation of the food, and of a trained dietitian who shall see to it that the individual patient has the diet best suited to his peculiar malady, for in these scientific days both the patient and his disease must be considered together. Another important essential, and one that is often entirely lacking, I am sorry to say, is a visiting staff with sufficient interest in this matter to exercise a watchful supervision over the suitability of the food for the individual case and over the manner in which it is served.

When all these are provided for, something else still remains to be done. It has to do with detail, but is nevertheless most important. Let me once more quote briefly from Thompson's article. Speaking of the usefulness of having suitable back rests convenient to the ward bed, he says: "Often a convalescent is able to sit up only long enough to eat a meal, which he could do in comfort with a back rest. But what nurse has time at the meal hour to walk a block and bring in a heavy rest to be used only a few minutes and then take it back? How much simpler to set the dinner tray flat on the patient's stomach, and let him try to eat lying flat, etc." All of this I quote simply to indicate that details tending to the comfort of the patient should receive some consideration and thought. It is not alone the essentials that must be provided.

One of the first things to strike the attention of a visitor to a strange hospital is the general atmosphere (so to speak) of cleanliness or its lack. One of the greatest comforts the average hospital patient can have is the cleanliness that should surround him, and for that reason alone, if for no other, the hospital has the obligation of being cleanly. The ward should be clean and orderly within reason, the floors free from litter, the beds and linen should be spotless, the nurses should be garbed simply and fittingly, and the orderlies should have at least the appearance of cleanliness; the out-of-the-way spots and the seldom-seen corners should be frequently inspected, and, of course, cleanliness should reach its acme on the operating floor. This point of cleanliness and order deserves more time than I can give it in a paper of this sort. A dirty, disorderly hospital is not to be tolerated.

It is conceded that a laboratory sufficiently well equipped for the making of the ordinary chemical examinations should be provided. While it is most desirable that every hospital should establish a pathological and bacteriological laboratory, and employ a competent full-time pathologist and bacteriologist, many hospitals cannot afford these luxuries. Nevertheless, pathological examinations must be made, vaccines, etc., must be prepared, and, if the hospital cannot afford laboratories of its own, it must pay for accommodation in the laboratories of its more fortunate sister institutions.

In these days a roentgen laboratory in a hospital is a necessity for the purposes of both diagnosis and treatment. Though the first cost of such a plant is very considerable, yet its installation, equipment, and maintenance can be financed gradually through the fees received from such users of it as are able to pay.

Departments of physical therapeutics, of hydrotherapeutics, of electrotherapeutics, etc., would of course be most desirable; equally desirable would be ample provision for outdoor and sunlight treatment, but all these are luxuries, and may well be dispensed with until the actual requisites have been secured.

It goes without saying that the apparatus necessary for the making of thorough physical and clinical examina-

tions and for the proper giving of post-operative and other treatment should be at hand in every hospital.

COMFORT OF PATIENTS

Coming to things of lesser importance, provision should always be made for the unusually long as well as for the unusually wide patient in the wards. Foot rests should be at hand, that patients may brace against them and sit comfortably in bed without slipping to the foot; likewise, there should be some simple, nonirritating method of keeping the feeble or mentally dull or mildly delirious patients from falling out of bed; in short, provide for the many lesser, perhaps nonessential, things that add so much to the welfare and comfort of the patient in bed. Science, in its application, should always be well mixed with common sense and kindness. It is often not so much the fine scientific equipment of the hospital, the expensive walls and floors, and the elaborate laboratories that spell comfort to the patient as it is the attention to the little homely details of individual service, and the cultivation of an atmosphere of kindness, cheerfulness, and assurance.

When does the responsibility of the public hospital to its patients cease? This opens a wide field for discussion, and I am not going to enter it to any marked extent. I merely present a few ideas for your future thought. How far should the patient be carried in his convalescence? This is an important consideration in the case of the poor and needy. Shall he be kept until he is able to work? Shall provision be made for gradually bringing his muscles up to the condition necessary for his undertaking his usual tasks?

Shall a follow-up system be instituted and maintained? If it is instituted, should not the information be gained as far as possible through the patient's family physician? I believe that it should, and I believe, too, that hospitals have too little regard for the family physician in many ways. It would, in my opinion, help many patients a great deal if, on their discharge, the family physician should receive not only the hospital's diagnosis of the case and a report of the operation or other hospital treatment, but also an outline of suggested treatment.

Unfortunately, the matter of expense is to be considered in connection with all these ideas, and each hospital must settle these and many other questions with due consideration and regard for the state of its finances. It is to be remembered, however, in this connection that the reputation of a hospital, and consequently the probable number of people eventually seeking assistance at its doors, as well as the interest of the general public in it, depends much on the comfort and care given patients as they come and go. The expense necessary for providing this comfort and care, while burdensome at first, in the end should prove to be a wise investment and should bring a large return.

It is eminently fitting that the Catholic Hospital Association of today, under the honorary presidency of a Catholic archbishop, should consider at one of its sessions the various duties, relations, and obligations of public hospitals, since it was within the bosom of the Catholic Church in the early days of the thirteenth century that public hospitals were first instituted, and later fostered in strict keeping with the kindly spirit of true Christian charity that has ever animated that Church in its attitude to suffering, afflicted humanity.

In this historic fact and in the countless acts of Christian charity, most of which are unheralded and unsung, that Catholic hospitals and Catholic sisterhoods have accomplished during the centuries which have followed the

thirteenth into history, let us take proper satisfaction and only that. Let us not regard this fact and these deeds as something to which we may point with pride, and then become fixed in the pose of pointing; let us not boast of this fact and these deeds, and out of ourselves and our own efforts give nothing to add to them; let us rather regard them as a splendid heritage which we should cherish and guard, and which should stir us to realize and discharge as best we may our obligations to our contemporaries and to our posterity as did our forefathers to their contemporaries and to us.

Sea Mussels as a Food in Hospitals

The sea mussel, one of the best and most abundant of sea foods, according to a bulletin recently issued by the United States Bureau of Fisheries, furnishes an example of waste of natural resources in America through failure to utilize it. In Europe the sea mussel is one of the most highly regarded shellfishes. Great Britain and Ireland consume about 35,000,000 pounds and little Holland over 65,000,000 pounds a year. In France about 400,000,000 pounds are produced annually and cooked in ways to delight the epicure.

The quantity of actual nutriment contained in the edible portions (the meat and liquor) of the mussel is slightly greater than in oysters and clams, and the mussel, therefore, contains at least as much food, pound for pound, as is found in related shellfish in common use. As the shells are thinner, a bushel of mussels contains considerably more foodstuffs than an equal quantity of oysters. A peck of sea mussels in the shell will supply all of the meat required for a meal for ten persons. Sea mussels are among the most easily digestible of foods, as has been demonstrated by the experience of consumers. Persons of weak digestion have found that they can eat sea mussels with impunity when meats cause them to suffer.

Sea mussels possess the advantage of being in season when oysters are out of season. But comparatively few oysters are marketed from April to September, and this is the season at which mussels are at their best on the coast of the New England and middle Atlantic states. Mussels can be cooked in the same ways as oysters and clams, and will afford a welcome change in the diet list for patients or hospital employees.

How to Calculate Syrup Density

Reference to the table herewith will enable the home or hospital canner to prepare syrup of any desired density. No allowance has been made for evaporation. For a 12 percent or degree syrup use $1\frac{1}{2}$ pounds of sugar to $5\frac{1}{2}$ quarts of water; for a 15 percent or degree syrup use 3 pounds of sugar to $8\frac{1}{2}$ quarts of water; for an 18 percent or degree syrup use $4\frac{1}{2}$ pounds of sugar to $10\frac{1}{2}$ quarts of water; for a 24 percent or degree syrup use 6 pounds of sugar to $9\frac{1}{2}$ quarts of water; for a 28 percent or degree syrup use 7 pounds of sugar to 9 quarts of water; for a 35 percent or degree syrup use 7 pounds of sugar to $6\frac{1}{2}$ quarts of water; for a 40 percent or degree syrup use 2 pounds of sugar to $1\frac{1}{2}$ quarts of water; for a 50 percent or degree syrup use 1 pound of sugar to 1 quart of water; for a 60 percent or degree syrup use 6 pounds of sugar to $4\frac{1}{2}$ quarts of water; for a 64 percent or degree syrup use 16 pounds of sugar to $4\frac{1}{2}$ quarts of water.—[O. H. Benson in *The Forecast*.

The erection of a \$25,000 sanatorium has just been completed at Marlin, Texas, for Dr. W. H. Allen.



CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature,
Army Medical Museum and Library, Office of the Surgeon-General,
United States Army.

The Portuguese-Hebrew Hospital in Amsterdam (Het Portugeesch-Israelitisch Ziekenhuis). Nosokomos, Amsterdam, 1916, No. 25.

Recently the new hospital of the Portuguese-Hebrew colony was opened. The colony of Portuguese Jews in Amsterdam has existed since 1610, but their old hospital no longer conformed to the standard of modern times, especially as it served at the same time as an orphan asylum. The new hospital is a neat building, and equipped with all the improvements of modern hospital construction.

The Hospital of the French Cities in Milan (L'ospedale delle città francesi in Milano). Dr. L. Pagliani. Rivista di ingegneria san., Milano, 1916, XII, No. 6.

Some time ago the Italian colony in Paris established a hospital in that city for sick and wounded French soldiers. Lately a similar hospital was founded for Italian soldiers in Milano, and the money was furnished by public subscription in all the larger cities of France. The hospital was established in a spacious factory, which was kindly offered for this purpose by its owners. The large rooms have been splendidly furnished and equipped with all the necessities of a hospital. The hospital contains 180 beds, and is under the management of the Red Cross organization.

English Hospitals Recommend the Use of Margarine in Place of Butter. The Hospital, London.

Margarine has now been used instead of butter at the Belfast Poor-Law Infirmary for three months. The result has been most satisfactory, \$1,725 having been saved, and, apart from the protest at the beginning of the trial, there has been no complaint. When the substitution was first made, the medical officers were authorized to order butter for any patient for whom they considered it desirable. This power has not been exercised by any of the medical officers. Dr. John McLeish reported on the matter on behalf of the medical staff, and said that up to the present they had observed no injurious effects from the use of margarine upon the patients in the infirmary.

The New Pediatric Clinic in Milan (La nuova clinica pediatrica a Milano). Rivista di ingegner. san., Torino, 1916, XII, No. 7.

Milan is one of the most progressive cities of Italy, and has better hospital accommodation than any other city in the kingdom. Another step forward has recently been made by the erection of a new pediatric clinic. The city owes this fine institution to the benevolent spirit of a wealthy lady, Signorina de Marchi. The new hospital is located on Commenda street. To protect the hospital

from the street dust, the main front was placed 10 meters back from the sidewalk, the intervening space being taken up by flower beds. The hospital contains three stories. From the middle of the main building a long, narrow structure extends backward, so that the ground plan of the hospital has the form of an inverted T. The ground on each side of the rear building is taken up by a garden.

The Municipal Hospital as a Factor in Clinical Teaching. Hanau W. Loeb, M. D. Journal Am. Med. Assn., LXVI, No. 22.

Since the establishment of the first medical school in America there has been a tacit understanding that the patients in public institutions should be placed at the disposal of medical colleges for clinical instruction. Under present conditions there is an economic waste of thousands of patients in municipal hospitals, who are lost as material for instruction to students in medicine. The author urges a closer cooperation between the hospital administration and medical schools, as well as public propaganda illustrating the good that could be accomplished by such a plan. The results would be that American medical institutions, like the European, would be able to bring the highest ideals of medicine into municipal hospitals and at the same time provide students with the absolutely essential.

Hospitalization at Leysin of Indigent Citizens of Vaud affected with Surgical Tuberculosis (L'hospitalisation a Leysin de Vaudois indigents atteints de tuberculoses chirurgicales). Bulletin démogr. et san. suisse, Berne, 1916, No. 11.

The league against tuberculosis of the Canton of Vaud, assisted by the cantonal government, has undertaken to send every year a certain number of poor children and adults suffering from surgical tuberculosis to Dr. Rollier's famous tuberculosis clinic at Leysin. It was at first intended to build a special hospital there, but on account of the war this plan had to be deferred to a later time. As the Leysin method cures completely the majority of cases of surgical tuberculosis, the organization of this service is expected to do much good. Statistics show that during the last twelve years on an average 240 patients died in the Canton of Vaud from surgical tuberculosis—i. e., tuberculosis of the bones, joints, peritoneum, and genitourinary organs.

Standardization of State Requirements of Training Schools for Nurses. Mary Brooks Eyre, R. N., American Jour. of Nursing, 1916, XVI, No. 9.

1. The main object of standardization is to further, through state registration boards, the efficiency of schools of nursing to meet the needs of the community.

2. Regulation by state boards is in line with modern efficiency methods.

3. Divergence of conditions obtaining in the different states makes standardization a matter for careful deliberation, and necessitates a choice of the practical rather than the ideal.

4. It is important not to attempt standards which cannot be honestly and wholly fulfilled by the schools in all states equally.

5. While not within the limitations of this paper to discuss all requirements, certain of them are especially urged, such as those covering affiliation, instruction of pupils, examination in practical work by examining boards, and standardization of the final passing grade.

6. The value of state-wide inspection by the state boards is emphasized and the accurate recording of sta-

tistics for the use of boards and of the bureau of registration, on whom the work of standardization must devolve.

7. The uniform standard of requirements leads ultimately to the establishment of a national examining board for nurses.

Washing and Cleaning. Wilder D. Bancroft. *Journal of Home Economics*, 1916, VIII, No. 7.

In the removal of dirt or grease spots from textiles, the following tentative classifications are suggested: 1, mechanical removal; 2, dissolving in a liquid; 3, peptizing with a liquid; 4, peptizing with a solution; 5, peptizing with a peptized colloid; 6, peptizing in several stages; 7, absorption in several stages; 8, peptizing with a liquid and absorption by solid; 9, change of substance forming the spot. Principles of this classification are enumerated and examples of various methods explained in detail. The author dwells on the scientific side of cleaning, demonstrating physical and chemical facts in view of decreasing labor as well as the conservation of textile goods. It is quite apparent that if the head of the hospital laundry were to consult the chemist or druggist regarding various drug stains, many dollars could be saved thereby. More encouragement should be given to research into the methods of absorption by solids in the laundry field.

Hospital Assistance in Florence (L'assistenza ospedaliera a Firenze). *Rassegna sanitaria*, Milano, 1916, XIV, No. 6.

The Italian hospitals are still to a great extent charitable institutions. Pay patients are few, and the number of indigent sick people asking for admittance to the hospitals is constantly growing. This condition prevails in many Italian cities, and, since the revenues of the hospitals remain in most cases the same, these institutions are laboring under financial difficulties. The hospitals are crowded, and there are frequently not sufficient means to erect new buildings. The city of Florence is in a similar condition with regard to hospital accommodation. There is need of a new large hospital, as the old ones are all overcrowded and are far from filling the demands of modern hygiene. In 1911 the city decided to erect a new large hospital, which, when completed, will have room for 1,000 patients. Two pavilions for tuberculous patients, one for men and one for women, are already completed. All the pavilions to be erected will have two stories and will be able to house 68 patients each.

Standard for Determining the Suitability of Patients for Admission to a Free Dispensary. Borden S. Veeder, M. D. *Jour. of the Am. Med. Assn.*, 1916, XLVII, No. 2.

Inquiry has shown that a definite standard of financial suitability for admission to free dispensaries has not been based on a study of the economic principles involved. There are two more or less distinct purposes for which dispensaries have been established—namely, for purposes of medical education and as a means of furnishing free treatment to the indigent poor. Each type of dispensary serves a purpose valuable in itself to both the medical profession and the public. Although it is natural to consider whether the same standard of admission is suitable for each type of dispensary, no such difference has been used in working out the standard described in this paper. A basic income has been worked out for various types of families and individuals below which patients should receive free medical services, and a classified scale is described for extending this standard for specified purposes.

The problem of dispensary abuse is in reality not so big as it is generally considered. Investigation shows that the actual percentage of abuse, where an effort is made to eliminate it, is small, and that but 2 percent of the patients being treated at the Washington University dispensary are financially unsuitable for treatment. The various means so far suggested to eliminate this 2 percent are impracticable.

Training the Hospital Dietitian. Alice V. Fewell. *Am. Journal of Nursing*, 1916, XVI, No. 10.

The author deplores the fact that the majority of dietitians are educated in schools designed for teachers of domestic science. Here they receive a thorough course in the theory and practice of cookery, the chemistry of food, physiology, and also in psychology and methods of teaching. Only a short part of the student's training is devoted to the study of invalid cookery and the principles of dietetic treatment of the sick. When she finishes this course and receives her diploma, she is well fitted to teach domestic science in schools and colleges, but is she fitted to take up the duties in a hospital and instruct nurses in hospital dietetics and invalid cookery?

The solution of this problem of training the dietitian lies in the hands of both the hospital and the domestic science school. Surely by a cooperation of these two institutions a course of training could be established which would benefit not only the dietitian, but the hospital as well.

The question of training the dietitian is bound to be taken up by hospitals and nurses all over the country, and the result will be a very different training for the dietitian of the future. The hospitals also must, to a large extent, modify some of their demands on the dietitian. Many dietitians are today doing, besides their own special work, also the work of housekeeper and purveyor for the hospital. We must lay down a definite line of work for the dietitian in the hospital, and then give her a training which will make her equal to her task.

Shall the Fahrenheit Thermometer Be Abolished? Ed. *Southern Medical Jour.*, 1916, IX, No. 8.

It may be of interest to hospitals and medical fraternities that Congressman Albert Johnson has introduced into the House of Representatives a bill (H. R. 528) to discontinue the Fahrenheit thermometer in Government reports. Some of the arguments brought out by the advocates of the change to the centigrade are: 1, that the centigrade scale is the recognized standard for all civilized governments save the English-speaking countries; 2, that the method is in use by all scientific men the world over; 3, that the transition would be gradual, since the Fahrenheit equivalent could be given in parentheses for a period, say, of eight or ten years; 4, that the greater difference represented by a degree of centigrade as contrasted with Fahrenheit would have a tendency to render the various temperatures more capable of conveying a definite meaning; 5, that the whole world would have a uniform scale; 6, that much valuable time now consumed in translating the one scale into the other would be saved; 7, that the weather bureau, the great source of temperature data, cannot make the change without Congressional sanction; if that bureau were authorized to use the centigrade, the public would acquire effort, and would welcome the simplicity just as they welcome the simplicity of standard time; the only landmark they would have to fix in their minds would be normal blood heat, about 98.6 F., which

would thereafter be called 37° C; 8, that if our fathers had not had some initiative, we would still be using the clumsy English monetary system in the place of our decimal system; 9, that Fahrenheit's mistake in the placing the zero not at freezing point, but 32 degrees below it, has been perpetuated for 195 years simply because nobody has taken the trouble to propose its discontinuance.

Hospital Internship. J. M. Boldg, M. D. *Journal of the Am. Med. Assn.*, 1916, LXVII, No. 8.

From the point of view of an internship, it is utterly impossible to consider many institutions at the present time calling themselves hospitals, under this designation. In order to be of service to the intern, scientific departments should be provided for; the balance of the hospital should be built around these departments. The author lays stress on better pathological and medical laboratories, roentgen ray, anesthetic department, necropsy room, and competent system of record-keeping through the entire institution. Staff men who neglect the opportunities offered by such scientific departments should be promptly retired and should be no longer tolerated in the hospital service. Superintendents should arrange a routine schedule, so that work goes daily to the laboratory, whether or not the staff men make a request. Records in all departments of the institution are a requisite of a properly standardized hospital. These records should cover, as a minimum, admission cards, record cards according to diseases, history sheets, temperature charts, order sheets, bedside records, operating and anesthetic records, laboratory request, finding sheets with correct card index of the laboratory, requisite and finding sheets with card index of roentgen ray department, follow-up cards carrying the house number, etc. Lack of interest in necropsy work in America is evident. This indifference is one of the greatest defects of present hospitals, and a strict effort should be made to rectify it.

Getting Rid of Ants. Ed. *American Food Jour.*, 1916, XI, No. 8.

As long as conditions are such as to attract ants, measures for getting rid of the insects will be of little value, says a new publication of the United States Department of Agriculture, *Farmers' Bulletin* 740, by C. L. Marlatt. The first step in freeing a place from these pests is, therefore, to clean up all food that may be scattered about, and to keep food supplies which may attract ants in antproof metal containers or in ice boxes. Cake, bread, sugar, meat, and similar substances are especially likely to attract the insects.

The use of baits is not recommended in the bulletin already mentioned because of the danger that these will serve merely to draw more insects into the house and thus actually increase the nuisance. Where it can be safely used, however, a syrup poisoned with arsenate of soda has been found effective. The formula for this syrup is 1 pound of sugar dissolved in 1 quart of water, to which should be added 125 grains of arsenate of soda. This mixture is boiled and strained, and on cooling is used to moisten sponges, which are placed where they can be reached easily by the ants. The insects collect the syrup and convey it to their nests, so that the whole colony is ultimately poisoned. Although this method has been found effective, as has been said, it should be remembered that the arsenate of soda is poisonous to human beings and to animals as well as to ants, and that its use must be safeguarded by the greatest precautions.

The Function of the Observation Ward at the City Hospital. M. A. Bliss, M. D., St. Louis. *Journal of the Missouri State Medical Assn.*, 1916, XIII, No. 8.

Briefly summarized, the advantages of temporary detention in an observation ward of the City Hospital are these:

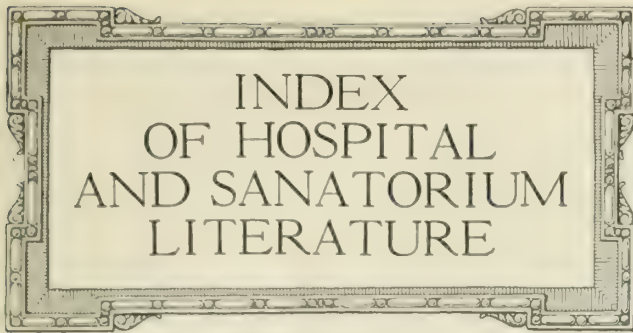
1. Instead of a jail, convenient hospital facilities are provided for the temporary confinement of insane individuals whose conduct endangers the life or property, or disturbs the peace, of their family, their friends, or the public at large.
2. The patient is given the advantage and the protection of a thorough mental examination by competent alienists in a general hospital prior to confinement in a hospital for the care of the insane. This offers the relatives or friends an opportunity to make arrangements for his future care, and protect the patient from commitment to an institution after dishonest representations.
3. The city is protected from individuals requiring prolonged treatment and care to which they are not entitled, and those to whom care is due are transferred with a great portion of necessary routine work completed.
4. The juvenile and the adult offender are sent to the court only after an examination by trained observers, who desire to recommend educational and corrective treatment when indicated rather than penal or legal.
5. Facilities are provided for treating temporary mental conditions and those induced by alcohol and drugs.

A Critical Analysis of Out-patient Work from the Point of View of Efficiency. Lovell Langstroth, M. D. *Jour. of the Am. Med. Assn.*, 1916, LXVII, No. 2.

Three hundred and forty-eight records form the basis of the following report, and, while this is a small number on which to formulate definite conclusions, they are suggestive, and should form the basis of future investigation, in which a large number of cases could be considered with the following facts for guidance:

1. Thirty-eight percent of the patients failed to return after diagnosis. The introduction of a follow-up system would decrease this percentage.
2. Eleven percent of the patients did not return a sufficient number of times to justify making a diagnosis. The institution of a department for preliminary examination of the patients is suggested in order to assign the cases to the proper departments and to eliminate those who come for trivial causes.
3. There were twenty-seven cases, or 7 percent of the whole number, in which it was not found possible to make a definite diagnosis.
4. Seventy-five percent of the patients sent to the hospital for further examination or treatment had a correct admission diagnosis.
5. Much of the time lost in referring patients to other clinics for consultation might be saved by equipping the medical department for the commoner special examinations.
6. Only thirty-eight percent of the patients in this series were benefited by their visits to the clinics.
7. Eighty-three percent of the patients did not return to the clinics after three months.

The author felt that those who have taken an interested part in out-patient work will agree that there is here the same need for careful attention to detail and effectiveness as in hospital work, but that this is rarely given. The figures show that this work, when considered from the point of view of the end-results, is disappointing, and they are given with the hope of stimulating interest in out-patient work and raising its standard.



ALBERT ALLEMANN, M. D., Foreign Literature,
Army Medical Museum and Library, Office of the Surgeon-General,
United States Army.

- Bossi, P.** The F. Ponti Pavilion of Mechanothrapy (Il padiglione di meccanoterapia F. Ponti). Ospedale Maggiore, Milano, 1916, IV, No. 3.
- Bridges, Helen Lillian.** A Manual of Practical Nursing. 84 pp., 8vo. St. Louis, 1916.
- Bull, P.** Positions of Chief Physicians in District Hospitals (Overlægeposterne ved amtssykehusene). Tidsskrift f. d. norske Lægefor., Kristiania, 1916, XXXVI, No. 12.
- Caminiti, C. A.** Statistical Report of the Division for Diseases of the Ear, Nose, and Throat of Piemonte Hospital in Messina. Arch. ital. di otol., Torino, 1916, XXVII, No. 1.
- Colcord, A. W.** The Modern Emergency Hospital. Internat. Jour. Surg., New York, 1916, XXIX, No. 5.
- Cowie, D. M.** The Aseptic Technic Method in the Management of a Contagious Hospital. Jour. Mich. Med. Soc., Grand Rapids, 1916, XV, No. 5.
- Cutler, Alice S.** Drug Patients in Westboro State Hospital. Boston Med. and Surg. Jour., 1916, CLXXIV, p. 701.
- Holst, H. F.** Tuberculosis Sanatoriums in Bratsberg District (Tuberkulosehjemmene i Bratsberg amt). Tidsskrift f. d. norske Lægefor., Kristiania, 1916, XXXVI, No. 12.
- Jenkins, F. W., and Fairfield, B.** Hospital Social Service—A Selected Bibliography. 3 pp., 8vo. New York, Russell Sage Found., 1916.
- Mackintosh, D. J.** Construction, Equipment, and Management of a General Hospital. 2d ed., 177 pp., 8vo. London and Edinburgh, 1916.
- Marcovici, G.** A Modern Pavilion Hospital on the Barrack Style (Un moderno padiglione-ospedale a sistema baraccato). Rivista di ingegneria san., Torino, 1916, XII, No. 12.
- Massa, F.** The Radiological Service in Wartime and the U. Magini Apparatus as Modified for Use on Hospital and Battle Ships (Il servizio radiologico in guerra e l'apparecchio U. Magini modificato per l'uso delle navi-ospedale e sulle navi da battaglia). Ann. di med. nav., Roma, 1916, XXII, No. 3.
- Moore, N.** St. Bartholomew's Hospital in Peace and War. 57 pp., 8vo. Cambridge, 1915.
- Richter, H. C.** Is an Aseptic Operating Room Possible? (La Salle aseptique pour opérations est-elle réalisable?). Rev. d'hygiène, Paris, 1916, XXXVIII, No. 1.
- Robertson, N.** The Examination of "Contacts" at a Tuberculosis Dispensary. Brit. Jour. Tuberc., London, 1916, X, No. 2.
- Rossi, B.** The Mobile Surgical Hospitals (Gli ospedali chirurgici mobili). Ospedale Maggiore, Milano, 1916, IV, No. 5.
- Rossi, B.** The Mobile Surgical Hospitals in Milan (Gli ospedali chirurgici mobili di Milano). Rivista ospedal., Roma, 1916, VI, No. 9.
- Salter, H. E.** A Cartulary of the Hospital of St. John the Baptist. 2 vol., 8vo. Oxford, 1914-15.
- Miscellaneous**
- A Municipal Salaried Obstetrical Staff.** Inez C. Philbrick, M. D. Women's Med. Jour., 1916, XXXI, No. 8.
- Getting Hospital Supplies to Germany.** Ed. The Survey, 1916, XXXVI, No. 20.
- Hospital Assistance in Rome and Latium** (L'assistenza ospedaliera a Roma e nel Lazio). Rassegna sanitaria, Milano, 1916, XIV, No. 6.
- New Hospitals for East Christiania** (Nye sykehuser for Kristiania østkant). Tidsskrift f. d. norske Lægefor., Kristiania, 1916, XXXVI, No. 12.
- Nurses' Instructions for Civil Service Examinations.** Civil Service Chronicle, New York. 14 pp., 4to. New York, 1916.
- Opening of the Mobile Surgical Hospital, "City of Milan."** L'inaugurazione dell' ospedale chirurgico mobile, "Citta di Milano". Ospedale Maggiore, Milano, 1916, IV, No. 3.
- Portuguese-Hebrew Hospital in Amsterdam** (Het Portugeesch-Israelitisch zeikenhuis). Nosokomos, Amsterdam, 1916, XVI, No. 25.
- Report of the Visiting Commission of the Ospedale Maggiore for 1915** (La relazione della commissione visitatrice dell Ospedale maggiore pel 1915). Ospedale Maggiore, Milano, 1916, IV, No. 3.
- Standard Surgical Out-Patient Clinics.** Ira S. Wile, M. D. Am. Jour. of Surgery, 1916, XXX, No. 8.
- Surgical Automobile Ambulances in France** (Le ambulanze chirurgiche automobili in Francia). Rivista ospedal., Roma, 1916, VI, No. 9.
- The Equipment of Research Laboratories.** Ed. The Hospital, 1916, LX, No. 1572.
- The Hospital for the Insane and the Mental Hygiene of the Community.** George A. Jones, M. D. Jour. Mo. State Med. Assn., 1916, XIII, No. 8.
- The Probationer.** Sara E. Parsons, R. N. Canadian Nurse, 1916, XII, No. 8.
- The Psychological Point of View and Autopsies.** Francis H. McCrudden, M. D. Boston Med. and Surg. Jour., 1916, CLXXV, No. 5.
- The Value of Hydrotherapy in State Hospitals.** Harriett H. Baird, R. N. Trained Nurse and Hospital Review, 1916, LVII, No. 3.
- Who Is a Dispensary Patient?** Ed. Jour. Mo. State Med. Assn., 1916, XIII, No. 8.

With the indorsement of the Clara Barton National Memorial Association, a motion picture film to portray the life of Clara Barton is being produced in a ten-reel series to be known as "The Angel of the Battlefields." The pictures are being made at the actual scenes of Miss Barton's work—one at the White House, portraying her conference with Lincoln; one at Santiago, and others on battlefields of the Civil War. The services of 4,000 persons will be required in the staging, and the production is expected to cost \$100,000. The scenario was written by Colonel Charles Sumner, who was a friend of Miss Barton for thirty-five years. The film will not be released for a year. It will be shown first in legitimate theaters, and afterward will make its abode in the memorial hall which is to be erected to Miss Barton in Washington, where periodical exhibitions will be given.

A community hospital, to be known as the Arnold Gregory Memorial, was opened at Albion, N. Y., September 12, in charge of Miss Nellie Gillett.



Conducted by MISS ANNIE W. GOODRICH.
Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

The Training School for Nurses as a Social Center

BY BLANCHE PFEFFERKORN, R. N.,

Nursing and Health Department, Teachers' College, Columbia University, New York City.

If any institution, by virtue of its birthright, can justly claim the joy of service, that institution is the training school for nurses. Added to this privilege is a second, and in no way a lesser behest—the great opportunity of the training school, by the very nature of its organization, to act as a social center. Considering that the training school has developed the first beyond all expectations, it has been singularly remiss concerning the second.

The reasons for this disregard are many—they involve the entire history of nursing. It might be briefly stated, however, that the neglect is far more apparent than real. Any thinking person, conversant with the old training school demands, will concede that the sin has been one of almost inevitable omission. Its chief cause can be easily predicated to insufficient numbers, long hours of duty, inadequate housing for social gatherings, and the necessary readjustments to a varying state of needs.

"The old order changeth." Of nothing can this be said more truly than of the training school for nurses. Both external and internal conditions are passing through a transitory stage. Society is now asking for a product quite different from the trained nurse of 1890. Twenty years ago her career included two possibilities—private nursing and institutional work. Today she is presented with a constantly increasing circle of opportunities, involving educational, civic, public health, social, and scientific fields. If she is to respond to these diverse calls effectively, her training must be something more than mere technical preparation—it must comprise a fine appreciation of her responsibility as an active element in the social structure.

An analysis of the purpose and organization of the training school will disclose that it is peculiarly fitted to develop the "socialized" individual. Its workshop is the hospital. This workshop does not consist of things, but human beings. Often these human beings are of different races and different nationalities. Mind, as well as body, requires treatment; each is a separate problem. In addition to the patients, the student nurse meets the friends of patients, casual visitors to the hospital, the maids and orderlies, and the medical staff. The educational value of this constant, and more or less close, contact with many types of people is inevitable. Her toleration is increased; her social sympathies are broadened; her understanding of character and her adaptation to

varied personalities assume new proportions. But, great as are these advantages, they are only incidentals that go with the day's work. The positive socializing factors of a nurse's education lie in the carrying out of the purpose of the school and the social relations of that body.

In his "Talk to Teachers," James says that "one who is educated is able practically to extricate himself, by means of the examples with which his mind is stored, and of the abstract conceptions which he has acquired, from circumstances in which he was never placed before." This quotation expresses the aim of a training school exactly. The education of a nurse carries out this aim by supplying her with a well-selected experience, both practical and theoretical. This experience provides for discipline, culture, altruism, and utility. The final test of the social efficiency of a nurse is her application of these principles in meeting daily situations.

The second positive factor, the social relations of the student body within the home, is teeming over with educational opportunities. Here are a number of people, living under the same roof, working along the same lines, filling a common need. Their unity of purpose and interests demands an interchange of thought and expression. Then, too, there exists another motivation for group activity. A work requiring application as intensive as nursing presents the danger of narrowing the individual. The nurses themselves are well aware of this fact. They clearly perceive that outside sympathies must be cultivated if their broader vision is to be kept unimpaired.

To stimulate a vigorous corporate life in the home, different schools are trying different methods. In most instances the administration is simply employing the "hands off" policy, then quietly watching the results, and stepping in only when absolutely necessary. As the students are a mature body, legitimate freedom, combined with mutual interests, seems to be sufficient incentive. The movement for a finer, higher government and interrelation in the home is growing out of the very heart of the school.

The training school for nurses connected with the Barnes Hospital of the Washington University in St. Louis furnishes an excellent example of this movement. In reply to an inquiry, the following information, which is given almost verbatim, was received. The different classes have class organizations and class functions, and conduct business pertaining to the class. Recently the senior class voted unanimously that a member of their class was unworthy of further consideration and should resign. They collected enough money to send her home.

The school has a form of self-government, conducted by a council composed of delegates from each class. The association regulates the conduct and affairs of the nurses off duty. When a nurse's conduct off duty is thought undesirable, her name is presented to the council in writing by three members of the association or by the superintendent of nurses. The council deals with the matter and, if necessary, takes the case to the association. Last spring, when the superintendent presented the names of two nurses, one was given another chance, and the other received an unfavorable vote and resigned at once before the decision of the association could be conveyed to the superintendent. This winter the names of two more offenders were brought up and both were voted another trial. One of these was a senior, who was sent home by her own class after the action of the association. Evidently the class organizations are the final authority.

The self-government is not as yet definitely worked out. Neither constitution nor by-laws exist, but the coun-

cil is now at work on a schedule of duties, election of officers, appointment of members to the council, etc. The nurses, as a whole, are very enthusiastic about self-government. The superintendent of nurses expresses the opinion that she feels it is having a decided influence on the personal development as well as the conduct of the group.

In addition to the school government and class organizations, the students are initiating and regulating various other activities. The association voted to have a weekly evening chapel service of twenty minutes, compulsory for the students. The superintendent conducts the service on request of the association. A May fete was introduced last year, and bids fair to become an annual custom. Music, a May pole dance, folk dances, and refreshments were among the features of the day. Not only the nurses, but the patients, employees, doctors, and visitors, shared this entertainment.

At the Newton Training School the impulse is taking a somewhat different direction. The social life is in charge of a social expert, who is a college graduate, with



Fig. 1. Miss Ford, junior pupil nurse, dancing at the May fete of the training school of Washington University, St. Louis.

special preparation for this work. She is called the physical and social director. Her duties are along suggestive and advisory rather than autocratic lines. The students themselves are the active factors. The seniors have started a "Current Events," the juniors a "Book Lovers'" Club. Folk dancing and social dancing classes have been formed. The entire school is entertained once every two weeks by one of the classes, the hostess for the occasion being chosen by the class. A student branch of the Y. W. C. A. was organized and accepted by the national organization. Through cooperation with the public library, a substation was established in the nurses' home. One hundred new books are left and removed each month. Particular attention has been paid to outdoor sports, such as skating, archery, basket ball, and tennis. In summarizing the purpose and results of the experiment, the superintendent of nurses writes: "The single desire is to give each individual nurse health and joy in her present duties, with a sense of security in her preparedness for the future. The results are especially

seen in a better school spirit, loyal to the point of inspiration. Instead of the school family being merely a working organization, it has become one, united in its pleasures and enterprises as well, with a drawing together equal to that of the real family."

The Massachusetts General Training School is also manifesting some rather interesting signs of group activity. Each class has its officers. They meet when there is something special they wish to consider as a class, but they have no regular meetings. A student government association has



Fig. 2. Children from the St. Louis Children's Hospital being taken across the road to the May fete of the training school of Washington University.

been formed and is growing in strength. A glee club is organized once a year, and is active about six weeks or two months before graduation. The old lines of demarcation between class and class are almost entirely obliterated. Only a nurse familiar with the old formal separation of classes, social as well as professional, can grasp the full significance of this last action.

Sufficient illustrations must have been given to demonstrate that the training school for nurses is very fairly taking its place, with other educational institutions, as a social center. The nurse of today is coming into her heritage as never before. Not only joy of service, but consciousness of social obligations and social preparedness, are some of the fruits of her training. She can truthfully claim to be one of the socialized products of modern society.

Why Does the Nurse in the General Hospital Need Training for Mental Work?¹

BY EFFIE M. TAYLOR, R. N.,

Supervisor of Administration, Phipps Psychiatric Clinic, Johns Hopkins Hospital, Baltimore.

In Dr. Adolf Meyer's address on "Where should we attack the problem of the prevention of mental defect and mental disease," at the National Conference of Charities and Corrections in Baltimore in 1915, he emphasizes, as one of his distinctive ideals in constructive work, dealing with certain clearly defined issues, the importance of "making the attack at the source," and this we would wish to do in the discussion of the problem involved in providing education in mental nursing for the general hospital student nurse, but the significant question is, What and where is the source?

Until within the last decade the nursing of the mentally sick was not an important part of the constructive and curative work of the hospital, and, in fact, it is only of recent years that the medical treatment of mental disease has assumed its present attitude toward its possibilities and responsibilities, but experience is teaching the value

¹Read at the twenty-second annual convention of the National League of Nursing Education, New Orleans, La., May 1, 1916.

of reeducative and constructive measures, and, together with the advance in medical knowledge of how best to treat the mentally ill, comes the advance in nursing knowledge of how to nurse the mentally ill, and physicians everywhere are calling loudly for women prepared to assist them in putting into practice what formerly was spoken of as "what should be," but never was!

A general awakening of the community to the fact that hospitals for the insane are not simply retreats and asylums, where "peculiar people" can be segregated from other members of society, and kept in confinement until such a time as their Creator sees fit to remove them, is fast taking place, and experience is showing that something more than custodial care is required if scientific work is to be accomplished.

Today the term "insane asylum" is being replaced by "state hospital"—an institution with a specific function, that of caring for and treating patients suffering from mental disease by modern methods; and such medical evolution calls for a corresponding development in nursing, so that what is to be the character of this development becomes the problem of the state hospital training school at the present time.

It is doubtful that even one physician, if asked in plain terms as to the relative value of the educated, cultured woman, and the ignorant, uncultured woman in caring for the mentally ill, would pronounce them as equal, and yet in many of our mental hospitals today no provision is made for a nursing staff superior in education and training to that of domestics.

In Miss Tucker's splendid report, based on a questionnaire sent out to the hospitals for the insane in the various states, we are given a somewhat adequate idea of what conditions exist in our training schools in state hospitals, although only 71 replies from 154 questionnaires were received. Of this number, only 41 had training schools of any kind, and of the 41 a very small proportion of the women at the head of the schools were adequately qualified to fill the position.

It is very difficult to form a true judgment of conditions in a hospital from mere questions and statistics, for there are nurses and nurses, and attendants and attendants, and personal qualifications cannot thus be properly estimated; but, when one realizes that with requirements for admission almost as flexible as desired; age requirements 18 years and less; hours of duty approximately from twelve to fifteen daily; very little attention paid to theoretical work; little or no practical supervision of ward work; domestics transferred from the scullery to the training school; meals served more often than not in the ward dining rooms; with only nineteen nurses' homes; and, to add to the complications in the majority of cases, the superintendent of the training school possessing little or no authority, it is not to be wondered at that applicants of even an ordinary type are difficult to obtain; indeed, to me it seems a miracle that there are as many splendid women as are found in state hospitals. This may, however, be explained by the fact that many people know little about what conditions should exist in hospitals, and judge of their value by the size, salaries paid to pupil nurses, and the length of the training school course; when once in the institution, a desire to accept a responsibility once assumed and a resolve not to be overcome by defeat has perhaps induced many women to continue a course almost unbearable. It is true also that the work itself is fascinating to many, and the feeling that one is a support and comfort to patients so dependent somewhat com-

pensates a good type of woman for her personal discomfort.

The conditions described in the report are not wholly typical of all state hospital training schools. While it is true that all more or less are bound down by laws, the regulations of the state, and of the hospital superintendent, and, with few exceptions, little real authority rests in the hands of the superintendent of nurses, a few of our institutions have succeeded in climbing up far beyond the rest. Connected with some hospitals are attractive nurses' homes; the attendants are a separate group; the wards are supervised by graduate nurses; a fairly good course of study is arranged; shorter hours on duty and longer vacations have been granted; better admission requirements, and affiliations in several instances with the large general hospitals are made, by which the graduates become eligible for state registration. True it is that even in these schools much is yet to be desired, but to those who are following closely the changes from year to year great encouragement is forthcoming, and what some schools have accomplished by persistent endeavor, even amid trials and frequent discouragements, often with keen opposition, many others may also accomplish. The need in the work is for better equipped women, with higher ideals and more courage, to wrestle with the problems; women who, by tact, patience, insight, foresight, and judgment, can cooperate with the hospital superintendents and convince them that they are capable of being intrusted with the nursing affairs of the hospital and the management of the training school. This is the hope for the future of state hospital training schools, and such women must be found. The field is full of teaching material, and should be available to those who need it; and to the general hospital we must look for help in the solution of the problem. Perhaps we are nearing the source of the difficulty, and may make the "attack."

And now to ask the question, "Why does the nurse in general work need mental training?" A great deal is being said at the present time concerning the curriculum in the training schools, and the question of specialization and election throughout the three years' course is being discussed with enthusiasm. Miss Lawler, superintendent of the Johns Hopkins Training School, expresses the opinion that the three years' course should be planned essentially to prepare the student for general nursing, and lay the foundation for the special branches to be perfected in a school equipped to deal with the particular problems involved in the special field of work chosen by the individual. The question naturally suggesting itself in this connection is, In what class shall we place the study of mental nursing? Judging from the consideration given the subject in the general hospital training schools, we feel certain that it does not belong in that class, for few schools recognize its importance beyond a few isolated lectures, generally given by one ill equipped to discuss the subject. Apparently, therefore, we are to suppose that its place is in the special hospital, and for the present we will assume that this is true.

Again to quote from Dr. Meyer, "What is vaguely called insanity—a term which the physician would gladly leave to the lawyer if he can use it—is really a wide range of greatly differing conditions and diseases, all playing havoc with our organ and functions of conduct and behavior."

What is our organ of conduct and behavior? Can we separate the brain and the body into two distinct organisms, or are they each a part of one complete whole? The answer is obvious; and this suggests the answer to

our question, Why do all nurses need training in mental work? Our general hospitals, in the main at present, are taking cognizance of only one-half of the human organism. The illness of the bodily organs is studied, and curative measures are taught, with little or no consideration for the illness of the brain, excepting in conditions where a definite pathological change is apparent. Illness which shows itself in an improper functioning of the organ and in a lack of adjustment to environment, or in unusual behavior, is not a recognized identity in the general hospital, and yet in every individual there is the possibility that, under conducive conditions, symptoms of an inharmonious functioning of one-half of the human organism may develop, and we may go further and say that, under conducive conditions which are present in every individual at times, an inharmonious functioning of the organ does develop. If this be true, is it not safe to say that a nurse is incompletely and inadequately prepared to meet the every-day demands on her intelligence if she has had no preparation for this important and ever-present type of illness? It is not altogether a special and peculiar condition, found only in the few, but to a more or less extent a constant condition found in the many.

Would one not think a nurse well equipped if she said, "I can take care of a patient suffering from an illness of the lungs or heart, but I cannot take care of a patient suffering from an illness of the stomach or kidney;" "I can care for a patient with pneumonia, but I know nothing of typhoid fever." Is she not also badly equipped if she is compelled to ask, "Is it a physical or a mental illness?" We think, "Yes," but I hear some one say, "You are not logical—you have the point of view of the specialist;" "Mental nursing is an entirely different branch of work, and cannot be classed with general work;" or, "What is there for a nurse to learn in mental nursing?" To answer the first question—yes, we have the point of view of the specialist, and that is well, for the reason that it is only by studying carefully any subject as a specialty that one is in a position to generalize. It is only by completely mastering a problem that one recognizes its points of similarity and difference to allied or opposing problems. It is the specialist who learns the needs and discriminates. To answer the second question, mental nursing is not an entirely different branch of work, and can be classed properly with general work; in fact, it is so much an integral part of general work that it is almost impossible to discover an abnormal physical condition without some corresponding abnormal mental condition associated with it.

In the general hospital wards associated with physical illness we see delirium, depression, excitement, neurasthenia, phychasthenia, paranoia, deterioration, and other psychoses; in fact, almost all conditions, more or less defined, which one finds in the special or mental hospital. And, again, you ask, "Why, then, does the nurse not get experience in mental nursing in her general training?" For the reason that seldom does the general hospital physician or the nurse recognize these conditions, and they are left uncared for. The patient is bathed and fed, and given the treatment and medication prescribed; but no time is taken to inquire into the reason why he is cross or irritable; why he weeps or why he laughs; why he is listless or why excited; why he has ideas of unreality, fear, and persecution; why he has cravings for this thing or that, or why he has questionable habits. He is frequently described as ungovernable, intolerable, disagreeable, impatient, selfish, and no effort is made to understand the why and wherefore. The other extreme is found

equally often, where a patient is humored and encouraged in morbid fancies and desires, by overindulgence and personal care, and the difficulty in the situation is the lack of an understanding of the underlying principles governing human life.

And is not this an important issue to the woman whose every moment is spent in the service of humanity? There is no abstraction about the nursing profession. It is a living, vital thing. The nurse is brought into contact with the life of her patient in the most intimate way, and her influence for good or evil is not to be estimated. It is the nurse who first takes care of the new-born infant. She sees the child as it grows up. She knows the home conditions as no one else does. She sees the boy and girl in school. She sees and is the friend of the girl in the factory and in the shop. She is in the district, and she is in the home of the wealthy. She knows the ignorant and she knows the cultured. In what other profession do women have her opportunities? What, then, should be her equipment to meet these responsibilities and opportunities in her daily walk through life? "Prevention" is the watchword in mental work, and to the educated nurse is given the opportunity. Why, then, do all nurses need mental training? Need I ask it? One cannot do preventive work if one does not know what should be prevented, nor can one observe without a knowledge of what to observe, and the mental and physical life are so closely related that one cannot consider one without the other.

In the early days before hospitals for the insane were established in this country, the patients were frequently cared for in general hospitals, but the care and treatment was largely custodial and the patients were released as soon as the excitement and confusion disappeared. Later, asylums in isolated districts were built in which to confine the unfortunate persons suffering from mental disturbances. These illnesses were not understood, and were looked on in the light of a disgrace, and the patient as more or less a criminal. But now the trend of things is toward a revival of the first plan—that of connecting the general with the mental hospital, but with widely different methods. The hospital now has become a place of study and research, rather than one of confinement and detention, and mental illnesses are studied under the same scientific conditions as physical illnesses.

To be sure, hospitals for the care of the mentally ill cannot all be in close proximity to general hospitals. The nature of the illness of the patients makes it undesirable when certain conditions are present, but the fact that these conditions are recognized as a symptom of illness, and that those suffering may be induced to seek help early in clinics in general hospitals, constitutes the most progressive step toward lessening what, according to statistics, is an overwhelmingly increasing evil. In order to do the most effective work, which can be accomplished only in the beginning of these illnesses, medical students and nurses must be educated to recognize the earliest suggestion of abnormality in the behavior and conduct of the individual.

Dr. Henry M. Hurd, when writing on the care of mental disease in general hospitals, said:

"Both physicians and nurses are filled with the spirit of the hospital which stands for constant effort for the cure of patients. General hospital nurses and physicians, in their turn, feel the mighty influence of a department which gives itself without reserve to the sympathetic care of those who are suffering in mind as well as in body, and who need the highest devotion of both physicians and nurses.

"If a general hospital is engaged in the education of medical men and nurses, these are additional reasons why it is desirable that opportunities be afforded to these two classes of students to become familiar,

on the one hand, with the recognition of forms of mental disorder and the best hospital methods of care, and, on the other, with nursing.

"It is further important that the study of the phenomena of mental disease should be made obligatory on medical students and nurses. Such disorders are encountered daily in the routine of general medical practice or of nursing. How few there are who are able to discriminate between a toxic delirium due to an infection, a fever, a poisoning by iodoform or some apparently harmless remedy used in medicine or surgery, etc., and a well-developed form of mental disease requiring close study and watchful care. And yet the future of the patient may be permanently affected for weal or woe by the prompt recognition of the condition."

Unfortunately, perhaps, all hospitals have not mental clinics as a special or allied department, and consequently all hospitals have not the facilities for providing within themselves this very essential part of a nurse's education, so, "if the mountain will not come to Mahomet, Mahomet must go to the mountain," and the inference is that, if the hospital training school needs affiliation, it must go after it.

The state hospital is fast recognizing an inadequacy within its own environment in providing a satisfactory and well-rounded training for the pupil nurses in its training school, and is stretching out its arms to the general hospital for branches not available. And why should not the general hospital recognize its limitations and recognize its needs? Those who claim that this need cannot be met give, as one reason why there cannot be an affiliation of general hospitals with mental hospitals, the lack of proper provision in state and private mental hospitals for the housing and care of nurses. While this is true in the majority of our mental hospitals, there are institutions where the living conditions are most desirable, and others are fast improving, or would improve, if sufficient pressure were brought to bear on the matter by the authorities of general hospitals before making affiliations; but we cannot wait for the millennium to come, and meantime are losing golden opportunities for this important preparation in a field already white unto harvest.

It is evident to a close observer that the affiliation of general hospital training schools with mental hospital training schools would assist in the solution of that very serious problem of providing the best kind of nursing care for the mentally ill patient. In connection with this question, also, Dr. Hurd has said:

"The nursing care of mental disease can never be adequately accomplished until it is placed in the hands of educated women who are trained for it and are familiar with general nursing, but who need an insight into the higher privileges of the nurse which are acquired only by actual contact with mental cases."

If the adequate nursing care of mental patients is to be accomplished through the educated nurse, it would seem that the plan of receiving students into the training school through the attendant class is not a very safe or sound one on any but a purely economic basis. Students must qualify here as elsewhere, and it is impossible, when ten to fifteen hours of the day are those allotted for hospital duty, to spend much time in study. One of our advocates of higher standards for nursing education still writes: "I should, of course, encourage persons in the orderly or maid servant group to endeavor to rise to the higher or training school grade, but I should be inclined to give up the idea of putting 'round pegs in square holes' by insisting on persons of all grades of intelligence going through the same training school."

We feel that round pegs are still being put into square holes by encouraging this standard and associating it with the training school. Democracy is a watchword in education, but, while it is occasionally true that unusual people with ambition and courage do enter into the humblest fields of labor for a period long enough to enable them to procure means to attain to something better, these are

the exception and not the rule, and it would seem that such isolated cases should be considered individually if we are to encourage the best type of woman to enter our training schools and raise nursing education to what it should be.

How can affiliation be accomplished? and how can time be spared in the three years' course to provide for the additional training? are questions, no doubt, which will arise in the minds of those already struggling with an overflowing curriculum, and a consideration for the needs of the hospital, which under our present system we are forced to recognize and provide for by our training schools. To enter into an adequate discussion of the plan would be a topic for another paper. Suffice it for us to remark that many greater problems than this have been solved by the splendid women of our beloved profession, and it is only for them to see the need to make provision to meet it; and, as was stated earlier in the discussion of this issue, the three years' course is designed to lay the foundation for all branches of nursing and not provide specialists in any, and it is only to this extent we claim that all nurses need some experience in mental work if they are to intelligently meet the daily demands thrust on all.

The decision as to how long a time should be spent in such study must be left at present to the individual schools, trusting that they will make use of what is available, and, failing a present affiliation, that the educators in the training schools will appreciate the value of mental teaching and experience for general work, and will advocate a supplementary course until public sentiment has been created in favor of its introduction as a required course in the curriculum of every training school.

We have spoken of the value of experience in mental nursing to the student as a nurse, but there is another value which we cannot underestimate—it is the unquestioned value to the student as a woman. There is no power greater than contact with one's fellows in a mental hospital to set one straight about oneself. Every nurse comes into the work with the feeling that she is associating with a group of people, one of which she could never become; but with a fuller understanding of the nature and causes underlying mental diseases comes a knowledge of our own mechanism, and an appreciation of the difficulties with which all have to contend. To see one's personality in its true light, to recognize and appreciate ideas and feelings otherwise a mystery, and to have courage to hold them up to view and accept them as definable and tangible—this in itself is a sufficient reason for desiring the experience. To be sure, a great deal depends on of what the nurse's work consists, and whether in the mental hospital she is simply a means to an end; but in an institution where the nurse's education has an identity, and where she is instructed systematically, she cannot fail to gain an insight into life and its variations which will prove to be one of her greatest assets, irrespective of the field in which she elects to work.

It may seem as though we have not kept very closely to our subject, but these problems are so essentially yours and mine, and are so interrelated, that one encroaches on some other territory without realizing it. The care of the mentally sick has such varied phases, and the hospital problems are so many, that it is difficult to determine where one begins and the other ends; and, when we face the fact that, as institutional, private duty, and public health nurses, we come in daily contact with it in one form or another, it is important that we lay aside prejudice and ignorance, and take time to consider what is our personal responsibility and to ask what do we know about it?

PHILANTHROPY AND THE PUBLIC HEALTH

Conducted by THE NEW YORK ASSOCIATION FOR IMPROVING THE CONDITION OF THE POOR.

BAILEY B. BURRITT, General Director.

WILLIAM H. MATTHEWS, Director.

Department of Family Welfare.

DONALD B. ARMSTRONG, M. D., Director.

Department of Social Welfare.

Please address items of news and inquiries regarding Philanthropy and the Public Health to the New York Association for Improving the Condition of the Poor, 105 East Twenty-second street, New York City.

Hospital Aid for School Children—Facilities and Procedure for Tonsil and Adenoid Operations in New York City Hospitals and Dispensaries

BY J. H. BERKOWITZ,

Special Investigator, Bureau of Welfare of School Children, New York Association for Improving the Condition of the Poor.

Of 305,665 school children examined for physical defects in New York city during the school year 1914-15, 63,445, or over 27 percent, suffered from defective nasal breathing and diseased tonsils. Practically all those children required operations for the removal of these serious defects, and, as about one-half the number belonged in the indigent class or just below the dividing line between those who can and those who cannot afford to pay the high fees of private surgeons, they gave rise to a problem—that of providing adequate clinical facilities for their treatment. Toward the solution of this problem the municipality and philanthropic institutions have contributed considerably, and yet the cases reported terminated as under effective treatment during the past three years never amounted to more than 37 percent of the number in need of treatment. One reason for this has been the insufficiency of clinics.

In order to determine what the actual available facilities for this work in New York city are, the Bureau of Welfare of School Children has made a series of investigations covering seventy hospitals and dispensaries maintained by the city and by private philanthropies, on the results of which the present study is based. In this survey of clinical facilities information was sought on the method of operation for tonsils and adenoids, ward accommodations, number of children operated upon, fees charged, investigation of applicants, etc. Besides giving the results of the inquiries on these cardinal points, this study will also present some data on and discussion of the cost of these cases at private and public hospitals, the compensation offered by the city to private hospitals for the treatment of cases which cannot be accommodated in the city hospitals, and the use and abuse of hospital and dispensary privileges.

EXTENT OF CLINICAL FACILITIES

That the need of special facilities for the disposal of the large number of school children's cases was very urgent, and that the available facilities were inadequate to the

city's needs, became evident four years ago when the exceedingly numerous neglected cases caused the health department to establish special clinics for operative treatment of diseased tonsils and adenoids. Available statistics show that over 50 percent of the cases terminated were operated upon at free clinics, and that from 25 percent to 31 percent of these were operated upon at the health department clinics. At the present time the available clinics are those of the general municipal hospitals and the private hospitals and dispensaries, the school children's clinics of the health department having been discontinued.¹

Out of seventy institutions on which information was obtained, sixty-two have nose and throat clinics. These are classified as follows:

Private hospitals	45
Private dispensaries	11
Municipal hospitals	6

The available nose and throat clinics may be grouped according to the types of institutions maintaining them—e. g., general hospitals, children's hospitals, hospitals or infirmaries specializing in nose and throat and allied work, and dispensaries. From the census given in the following table it will be seen that more than half the total number of clinics are in the Borough of Manhattan:

TABLE I. CENSUS OF CLINICS

Privately and Municipally Maintained.

Borough	General Hospitals	Special Hospitals	Children's Hospitals	Dispensaries
Manhattan.....	20	6	2	8
Bronx.....	4	1	..	..
Brooklyn.....	13	1	..	3
Queens.....	2	..	..	..
Richmond.....	2	..	..	..
Total for city.....	41	8	2	11

Total number of clinics in Greater New York, 62.

MANNER OF OPERATION AND AFTER-CARE

In considering the adequacy of facilities and method of operation, the clinics were classified according to their compliance with the requirements now generally indorsed by medical authorities and as set forth in the following resolution of the Public Health Committee of the New York Academy of Medicine:

"That all adenoid and tonsil operations on children should be done under general anesthesia, and

"That hospitals where adenoid and tonsil operations are performed should be equipped to keep their patients in the wards for at least eighteen to twenty-four hours after operation."

The section on laryngology and rhinology of the New York Academy of Medicine has rendered a majority opinion that "both tonsillectomy and tonsillotomy are operations requiring the facilities of a hospital."

According to these requirements, dispensaries are not qualified for this work, as out-patient practice does not call for bed care. Nevertheless, two dispensaries were found equipped with bed wards. At six dispensaries these operations are performed under general anesthesia, and no better provision made for the after-care of patients than allowing them to rest for an hour or longer, reclining on benches or sitting up in chairs. Following are statistical summaries showing the manner of operation with reference to the use of anesthetic in hospitals and dispensaries, post-operative care, and ward accommodations provided for this purpose:

¹For an account of the work of the health department's clinics see Free Municipal Clinics for School Children, by J. H. Berkowitz, No. 41, reprint series, Department of Health of the City of New York; also Clinics for Necessitous Children, by the same author, THE MODERN HOSPITAL, April, 1916, Vol. VI, No. 4, pp. 290-292.

TABLE II. GROUPING ACCORDING TO CLINICAL METHODS AND FACILITIES

A. Manner of Operation.		
	Hospitals	Dispensaries ¹
All operations under general anesthesia.....	42	6
Either general or local anesthesia.....	4	5
No anesthesia	4	3
General, local, or none (no fixed rule).....	2	1

B. Post-Operative Care		
Patients kept eighteen to twenty-four hours...	50	2
Discharged soon after operation, varying from one to three hours.....	2	5

¹Including out-patient departments of general hospitals.

C. Ward Facilities Provided			
	Municipal hospitals	General hospitals	Special hospitals
Separate ward for nose and throat cases	1	3	5
Children's general wards.....	5	27	1

D. Provisions for Resting in Dispensaries	
Special resting room, hospital out-patient departments.....	5
Special resting room, dispensaries	2
General resting room for all patients, dispensaries.....	3

The use of anesthetic and the after-care given depend in some instances on the ability of the patient to pay therefor. Thus, in some hospitals where operations are performed according to the highest requirements and the necessary post-operative care given in the hospital proper



Fig. 1. Why the clinics are needed. These are typical of the thousands of school children suffering from adenoids.

if the patients can afford to pay a minimum fee, the out-patient departments of these same hospitals will operate either with or without anesthetic and provide no after-care whatever.

CHARGES FOR OPERATION

The minimum fee usually charged by a surgeon for an operation on adenoids or tonsils to a private patient is \$25, though it is possible that some charge less, a fact which it would be difficult to ascertain with reference to a sufficiently large number to establish any general rule. We are concerned, however, with the class of patients who, being unable to pay the customary fee, must resort to the free clinics or dispensaries. In cases where a dispensary accepts the poverty plea, either the usual dispensary fee, varying from ten cents to twenty-five cents, is charged, or even this is waived. Then there are the cases of persons whose incomes, while keeping them ordinarily out of the dependent class, are not sufficient to meet the emergencies requiring expenditures for medical care.

Such persons are sometimes able to pay a fee ranging from \$1 to \$5. They are at a disadvantage in going to a dispensary which is not properly equipped for this sort of work when there are hospitals with adequate facilities and approved methods, but charging no more than some dispensaries do.

Data obtained from thirty-eight hospitals in the city of New York showed the range of fees to be from \$1 to \$5, with one exception, where the minimum fee for the operation is \$5 and an additional charge of \$1.50 is made for each day of hospital care. The fees at some of the institutions are designated variously as being either for operation and ward care, "for bed and board," or covering the cost of the case to the hospital on the basis of a fixed per capita cost per hospital day. In several places the



Fig. 2. What the clinics did for the children shown in Fig. 1. Relieved of the handicap, they are healthier, happier, and brighter.

fee is determined by whether anesthetic is used, one hospital charging \$5 for an operation under general anesthesia and \$2 when local anesthesia is used. Another institution offers operations free to the needy, without regard to the use of anesthetic, but charges \$2 "for lodging." Curiously enough, one hospital making no charge for the operation properly done under anesthesia, but charging \$1.75 for "bed and board" in the hospital proper, asks \$1 to \$2 for an operation in its out-patient department without anesthesia and without bed care. The following table shows the number of hospitals and dispensaries grouped according to the scale of fees:

TABLE III. MINIMUM FEES CHARGED FOR OPERATION

Minimum fee	Hospitals	Dispensaries
\$5.00	10	1
3.00	4	2
2.50	5	..
2.00	4	2
1.00-\$2.00	15	5

Practically all the private hospitals and dispensaries claim that the usual fees are waived in deserving poor cases.

PAYMENT BY THE CITY

Twelve of the hospitals state that they report the dependent tonsil and adenoid cases to the Department of Public Charities in order to receive compensation from the city. Five hospitals neither investigate nor report to the city these cases. Dispensaries receive annually from

the city of New York a gross allowance of \$250 in lieu of payment for any specific number of free treatments that are given.

Since January 1, 1914, the Department of Public Charities has been paying private hospitals at the rate of \$1.25 for each tonsil and adenoid operation performed by them if investigation established the patient's inability to pay a minimum fee. This payment is intended specifically to cover one day of hospital care. Every case reported by the private hospital to the Department of Public Charities for payment by the city is investigated by examiners of the Bureau of Dependent Adults. An important element in the agreement existing between the Department of Public Charities and the private hospitals is the "emergency" of the cases reported. Under a strict interpretation of this term the department might properly disapprove the majority of, if not all, the tonsil and adenoid cases reported by the private hospitals. It is because the



Fig. 3. Waiting room of a children's clinic. Adenoid and tonsil cases can be readily distinguished from the others—listless, heavy faced, some with open mouths and some with undeveloped chins.

department has waived this important condition governing the care of dependent cases that the hospitals have agreed to accept this rate of payment, which applies to all surgical cases, with the limitation in this instance of allowance being made for only one day of hospital care, regardless of the actual length of time spent by the patient in the institution. This rate is new, and represents an increase of 15 cents over the former rate. Hospital officials nevertheless complain of this compensation, alleging that in some cases patients have received more than one day of hospital care.

In order to test the soundness of this claim, an examination was made of the records of 302 nose and throat cases that were reported by private hospitals to the Department of Public Charities in the course of three months. The length of stay in the hospitals of these cases ranged from one to sixteen days, giving an average of two days per case.

The fact that 60 percent of the cases received but one day of hospital care is probably more conclusive than the average number, for the reason that the cases reported to have stayed in the hospital more than three days were from general hospitals treating various acute diseases, and in all probability the operations for tonsils and adenoids were performed on patients confined in these hospitals with some more serious ailment.

TABLE IV. NUMBER OF PATIENTS AND DAYS OF HOSPITAL CARE REPORTED BY PRIVATE HOSPITALS TO DEPARTMENT OF PUBLIC CHARITIES

Days	Cases	Days	Cases
1	123	7	1
2	24	8	1
3	11	9	2
4	6	11	1
5	3	16	1
6	1		

REASONS FOR DISAPPROVAL

The investigations made by the examiners of the Department of Public Charities determine whether the city is to pay for the cases treated at private hospitals. The reasons for rejection, eliminating those applying to some specific classes of patients, may be any of the following: unknown at residence given, insufficient history, ability to pay, previous arrangements, not emergency, refused treatment, nonresident. As has already been stated, the non-emergency of the tonsil and adenoid cases is waived by the department.

Out of the 302 cases the records of which were analyzed, only thirty-two, or about 10 percent, were not approved for payment.

TABLE V. REASONS FOR REJECTION AND NUMBER OF CASES REJECTED

Ability to pay	12
Paid	3
Insufficient history	2
Not found	7
Nonresidence	1
Not stated	7
Total cases rejected	32

The ability to pay is measured by the extent of the weekly income of the family, as allowing or not the expenditure of \$1.25 for an operation. Investigators found



Fig. 4. Doing the work properly. Operations for tonsils and adenoids should be performed under general anesthesia, as no child ought to be subjected to the pain and shock which are otherwise inflicted.

in some cases that patients had paid for the operation after the hospital reported the case to the charities department.

COST OF CASES AT PRIVATE HOSPITALS

It will, no doubt, be found interesting to compare the cost of maintenance per day of patients in private hospitals with the fee received from the Department of Public Charities for one day's care of surgical cases. Strictly speaking, the adenoid and tonsil cases must be considered as one-day cases, since the general rule as well as the practice is to discharge the patients twenty-four hours after admission, a longer time elapsing in but very few cases.

For the purpose of this cost analysis, the financial reports of fifteen hospitals have been examined. The accompanying table gives the cost per day of ward patients. It will be seen that the lowest figure is \$1.10, at St. Mary's Hospital for Children, and the highest \$2.68, at New York Hospital. The average for the fifteen institutions is \$2.17.

TABLE VI. COST OF MAINTENANCE PER PATIENT PER DAY AT PRIVATE HOSPITALS IN NEW YORK CITY

Mount Sinai	\$2.17
New York	2.68
St. Luke's	2.17
Post-Graduate	2.65
German	2.47
Roosevelt	2.25
Lebanon	2.02
Beth Israel	2.16
Polyclinic	2.53
Sydenham	2.02
French	1.67
St. Mark's	2.28
St. Mary's	1.10
New York Eye and Ear Infirmary.....	2.00
Manhattan Eye, Ear, and Throat.....	2.45
Average for all hospitals, \$2.17.	

COST OF CASES AT MUNICIPAL HOSPITALS

Apparently it costs the city of New York less to maintain its chain of public hospitals than it costs to maintain the private institutions, as will be seen by comparing the figures in the following table with the preceding one. The financial report for Bellevue and Allied Hospitals for the year 1914 (the latest available) shows an average for the four hospitals of \$1.92 per patient per day, "including all expenses paid by Bellevue and Allied Hospitals, but not including cost of electricity or gas, printing, and stationery, furnished by the Board of City Record" (Column A). Excluding repairs, replacement and extraordinary expenses, the average cost per patient per day was \$1.86 (Column B).

TABLE VII. COST OF MAINTENANCE PER PATIENT PER DAY AT MUNICIPAL HOSPITALS IN NEW YORK CITY, WITH (A) AND WITHOUT (B) EXTRAORDINARY EXPENSES

	A	B
Bellevue	\$1.75	\$1.64
Gouverneur	1.92	1.82
Harlem	1.94	1.83
Fordham	2.07	1.96
Average cost per patient per day at four hospitals.....	\$1.92	\$1.86

ARE HOSPITAL AND DISPENSARY PRIVILEGES ABUSED?

The charge is frequently made, more often than not off-hand, that large numbers of persons receive the advantages of hospital and dispensary treatment who are not entitled to them and are financially able to pay for private medical and hospital care. In the course of these investigations the question was put to a number of hospital officials who were considered qualified, by experience, judgment, and opportunity for observation, to speak with authority. The opinion prevailed that such charges are not warranted by the very limited number of persons who succeed at times in abusing dispensary privileges. Although the majority of institutions do not make any thorough investigations of applicants before giving treatment, occasional investigations made by various institutions have borne out the judgment of dispensary staffs to pass on the eligibility of applicants for free treatment. On this point the report of the Committee on Inquiry into the Departments of Health, Charities, and Bellevue and Allied Hospitals in the City of New York, appointed by the Board of Estimate and Apportionment, offers some convincing data.

"The enormous attendance at many of our leading dis-

pensaries," the report states,¹ "has frequently been cited as proof of the widespread abuse of dispensary privileges on the part of people who can afford to pay for medical services. It is more than doubtful if there is much to sustain this view. At a recent convention of the American Hospital Association in Boston the president of the Association vigorously expressed the opinion that this alleged dispensary abuse did not deserve much consideration. Many other experts in dispensary work are of the opinion that the term 'dispensary abuse' ought to be construed to mean abuse of patients on the part of the dispensary, and not abuse of dispensary privileges on the part of patients." In support of this contention, the report cites the facts disclosed in an investigation of one of the large hospitals.

SHOULD THE CITY DO THIS WORK?

As previously shown, the city of New York pays the private hospitals for tonsil and adenoid operations on the basis of daily maintenance, as it does for other surgical cases. The compensation, although little more than one-half of the average cost of a ward case at the private hospitals, is not much less than the cost at city hospitals. Objection has been raised to the subsidizing of private hospitals by the municipality. On the other hand, the private hospitals are not content with the rate of compensation for this particular class of cases. The very large number of children's tonsil and adenoid cases makes it quite impossible to care for them all in the city hospitals, and, since the private hospitals are ostensibly philanthropic institutions, such an arrangement as the present one should be regarded as equitable.

Since the closing of the health department clinics for school children, efforts have been made to transfer to the city hospitals as much as possible of the work which would otherwise have been done by these clinics. This plan went into operation in January, 1916, with the result that there has been a constant and rapid increase in the number of operations performed for tonsils and adenoids. It is expected that the present year will show a threefold increase over the previous year's record in this department. The following table is a fair indication of the rate of increase at the four hospitals, giving the average number of operations per week:

TABLE VIII. INCREASE IN TONSILLECTOMY CASES AT BELLEVUE, GOUVERNEUR, HARLEM, AND FORDHAM HOSPITALS, FOR FIVE MONTHS, 1916²

Month	Weekly average number of cases
January	38
February	38
March	51
April	61
May	106

Coincident with the question of dispensary abuse is that of pauperization. Again the conclusions of the Board of Estimate and Apportionment Committee, which made the inquiry already cited, may be accepted:³

"In regard to the pauperization of those receiving free benefactions, it must be said that there is an important distinction between the rendering of medical service and the bestowal of material goods. There is some reason in the argument that free gifts of food and clothing increase dependence, since the individual should be able to provide

¹Report of the Committee on Inquiry into the Departments of Health, Charities, and Bellevue and Allied Hospitals in the City of New York, appointed by the Board of Estimate and Apportionment. City of New York, 1913, p. 477.

²Advance report through the courtesy of the secretary of the board of trustees of Bellevue and Allied Hospitals in the city of New York.

³Report of the Committee on Inquiry into the Departments of Health, Charities, and Bellevue and Allied Hospitals in the City of New York, appointed by the Board of Estimate and Apportionment. City of New York, 1913, p. 478.

sustenance and shelter for himself and his family. Any one who cannot do this is rightly considered a failure, but this does not apply to cases of disease. Sickness and injury are often due to causes beyond the control of the individual, and the family budget that is just adequate to provide for the necessities of life has no margin for the proper treatment of disease. A family of six may be independent on an income of \$12 or \$15 a week, and yet would not be able to meet the added expense of sudden sickness. The city's free medical service would not break down the independence of such a family; rather, it prevents dependence while removing the cause and reestablishing the family on a self-supporting basis. It can hardly be asserted that the family would relapse into dependence by willfully inviting sickness, and, so far as free medical service safeguards the community and promotes social efficiency, it is a legitimate part of municipal expenditure."

INTERIOR DECORATIONS IN HOSPITALS

A Plea for Relief From the Deadly Sameness of Treatment in Corridors, Wards, and Rooms

Is such a thing desirable and is it feasible? This double-barreled question will most likely be answered in the negative by a large majority of those engaged in hospital work. Doctors, nurses, and hospital superintendents will express the opinion that interior decorations in a hospital would be subversive of the sanitary arrangements deemed necessary in medical practice; also, that their introduction would tend to confuse the minds of patients. Such objections would be, however, only supposititious, for little, if anything, in the way of decorating hospital interiors has thus far been attempted.

The writer of this article, although a layman in hospital affairs, ventures to express the opinion that it is possible to make certain rooms in a hospital artistic and attractive without in the least interfering with the things regarded as necessary for perfect sanitation. He also believes that such rooms would be conducive to the welfare of the patient.

A vast majority of cases of illness are treated in homes in which no change in the arrangement of fittings and furnishings is considered necessary for the proper treatment of the patient. Doctors and nurses come and go, treating their charges in the same surroundings as when the occupants are well. It will not be controverted that the home is the best place for a sick person to be doctored. The things he has assembled and loves for their individual merit or their associations contribute much to his comfort and enjoyment, and are efficient aids in his recovery. Love of the beautiful is in the heart of every man, no matter how poor. Should not the hospital, therefore, be made attractive, so that men and women, and children, too, when obliged to go there, may have something besides a cold sepulchral glare confronting them?

A hospital, to the average person, is a repellant institution. He goes there with gloomy forebodings—with his mind dwelling altogether on his physical condition. He leaves his home, humble though it may be, with all its little personal touches, and is brought into a great barn-like structure without a single adornment. There is nothing there in the way of art with which to feed his hungry soul. How great must be the longing of many a poor soul to have near him some of the things he has had to leave behind. It would seem that something might be done to beautify the room and wards of a hospital, so that the patient would retain pleasant memories of his enforced stay there.

The average hospital is, so far as the interior is concerned, a forbidding sort of place. The exteriors seem to have been the only part where the architect was allowed

to display any artistic features; for the inside only the bare openings, with an apparent studied evasion of architectural ornament. Generally, no attempt has been made to get a pleasing shade of color for the painted walls; everything sacrificed for utility; furniture unshapely, and all other inanimate objects void of all artistic merit.

Is it necessary, in order to combat disease, to eliminate all moldings, projections, and ornamentation in the interior architecture of a hospital? Articles of adornment, perhaps, are less guilty of wrong-doing than some of our doctor friends would have us think. Twenty or thirty years ago a few influential members of the profession in the city of Boston conceived the notion that many cases of illness were caused by the presence of arsenic in wall paper, and they succeeded in having a state law passed prohibiting the sale of wall paper that contained arsenic. Now, it does not seem reasonable that particles of arsenic sometimes found in a wall paper could be active enough to extract themselves from the paper and enter into the system of the occupant of the room in sufficient quantity to poison him. It is doubtful if there was ever a well-authenticated case of arsenical poisoning contracted in any such manner. The diagnosis of one notable case in which it was claimed that the man was made ill through sleeping in a room with arsenical wall paper was proved to have been incorrect by an autopsy.

It is, of course, conceded that there should be no lavish display in the treatment of hospital rooms. Discretion and discrimination should govern our efforts in this as in every department of life. The character of the hospital will necessarily be of the first consideration. Those devoted to surgical cases should be treated differently from those established for diseased patients, while those for children should be applicable to the little ones.

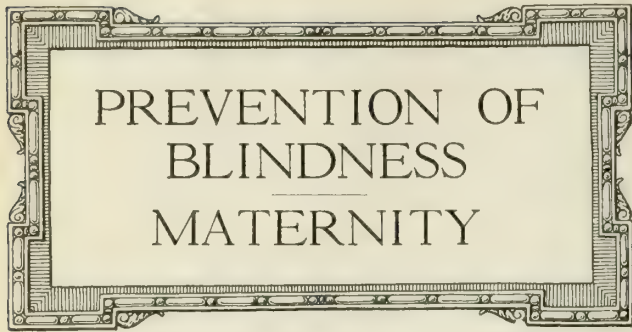
Waiting rooms, especially, should have attractive walls, floors, and furnishings. It is there where sorrowing ones gather for treatment or to visit their friends and relatives. An artistic interior would do much toward soothing their anguish. Rooms for private patients in all hospitals, and especially those for maternity cases, should be made as homelike as may be consistent with the requirements of modern therapeutics.

The writer has no specific suggestions to make for introducing interior decorations in a hospital. He surmises that it would be largely a matter of experimentation. Walls might have mural decorations or simple stenciling, or they might be hung with a washable sanitary texture, of which there are good designs. Pictures might be framed and hung in a way that would not be a menace to health as dust catchers. Windows could be draped in smooth-finished materials easy to launder. Furniture should be designed in a characteristic form, and constructed, decorated, or finished in a manner consistent with all sanitary requirements. Doubtless there would be many other things that could be treated in an artistic way.

This article is written not so much for direction as a plea. If it should meet with the favor of those who contemplate the erection of a hospital so as to cause them to consider, even in a small way, the desirability of incorporating artistic features for the interior, it will have served its purpose.

Art is no longer bound up in the works of the painter of pictures or the sculptor of marble; it is coming to be more and more a recognized factor in the makeup of many useful articles. For the good of humanity, it should be considered in the fittings and furnishings of a hospital as well as any other building where human beings are to be housed and cared for.

C. VICTOR TWISS, New York.



Conducted by CAROLYN CONANT VAN BLARCOM, R. N.,
Secretary National Committee for the Prevention of Blindness;
Chairman Committee on Prevention of Blindness and
Midwives, National Organization for Public Health
Nursing.

Please address items of news and inquiries regarding Prevention of Blindness—Maternity to the editor of this department, 130 East Twenty-second street, New York City.

Motion Pictures and Eyestrain

BY GORDON L. BERRY,

Acting Secretary National Committee for the Prevention of Blindness.

The past decade has witnessed the growth of an American industry, the development of which has been so phenomenal as to be almost unbelievable. The industry referred to is that popularly known as "the movies," and, although scarcely more than ten years ago one might have looked in vain for a theater devoted to the silent drama except in our larger cities, today there is hardly a single backwoods community without a motion picture theater readily accessible to its inhabitants. From a very modest start in the United States, popular at first in the far western states, this industry has reached such a point of popularity that it was recently listed as our fifth largest industry. Millions have been spent in its development, and multimillionaires created almost overnight by the receipts from tremendous audiences which daily and nightly fill to capacity even the largest auditoriums where the filmed drama is displayed. There are more than 25,000 theaters devoted to motion pictures, and it has been estimated that there is an average daily attendance at these theaters of more than 20,000,000 men, women, and children.

The sudden popularity and development of motion pictures in this country has created many new problems, among the most important of which have been those relating to health. Whereas attendance at a theater used to be a somewhat rare occurrence with most families, due not only to the scarcity of attractions, but also to the expense, we now find it possible, through the very modest entrance fee required at most motion picture houses, for the members of any family to be regular patrons once or twice a week or even more frequently, and there has been considerable question and study as to the effects on health of such constant association with crowds in such poorly ventilated and poorly lighted auditoriums as are frequently provided by the managers of motion picture houses in both the larger cities and in the small communities. It is in regard to one phase of the health question that this article deals—the one phase regarding which there has been perhaps the most interest evidenced by the general public.

"Will frequent attendance at the motion picture theaters affect my eyesight?" Probably no question has been put to oculists and physicians generally so many times during the past decade as has that. Generally speaking, the answer is: 1, motion pictures, with defects of photography, manufacture, and projection apparatus, may

prove injurious to eyesight; 2, eyestrain caused by viewing motion pictures may indicate a subnormal condition of the eyes, which should demand immediate investigation on the part of your physician.

While there has never been as extensive a study made of this subject as might be desired, there have been occasional investigations by interested ophthalmologists, illuminating engineers, and others, and certain conclusions have been developed which time is proving logical, and which are at present generally accepted. These scientific studies have been in large part based on certain principles relating to illumination and eyestrain, and embodying the following chief points as possibly productive of a deleterious effect on vision:

- 1, the effect upon the eye of glare from a poor motion picture screen, or as the result of improper radiation from the screen; 2, the general illumination of the auditorium; 3, the position from which the motion picture is observed; 4, defects in the pictures themselves, such as unsteadiness due to poor or careless direction in acting, bad photography, film blemishes, or improper projection; 5, the effect upon vision of constant, prolonged attention.

Taking up these points in the order mentioned, we find, first, that there are at present two distinct types of screen, one consisting of a smooth surface dressed with aluminum powder and lacquer, the other being a large screen of plate glass, the back of which has been painted with the whitest and most opaque paint obtainable. The first of these is, of course, the least expensive, and, unless the surface is pebbled or roughened, the picture thrown thereon is not entirely discernible to a spectator who may be viewing the picture from the far side of the auditorium. Furthermore, due to the metallic tint which usually results from such preparation of the screen, there may be produced a considerable amount of color distortion, and, unless the screen has been properly mounted in a perfectly flat plane, there will result a serious glare. Experts appear to agree that the plate glass screen is the ideal reflecting surface, and is productive of far better pictures, without glare and with the minimum of distortion apparent.

Radiation of light from the surface of a glass screen should not in itself prove any menace to vision, as the intensity of illumination on the average screen is far less than is generally supposed. Through the lens system generally in use, a 10,000-candle-power brilliancy at the point of contact of the carbon arcs back of the film in the projecting machine transmits but .0022 candle-power of light upon the screen itself.

The auditorium should be as light as may be consistent with securing satisfactory detail in the picture. All sorts of light sources which might cause glare should be eliminated, especially chandeliers, wall brackets, orchestra lights, etc., which may fall within the spectators' range of vision. Illuminating engineers recommend that the intensity of illumination should be graduated from the screen outward toward the rear of the auditorium, with the greatest amount possible at the back, and that the indirect system of lighting should be used, as it best prevents glare. In spite of the fact that the light intensity on the screen is in itself small, yet, in contrast with the surrounding illumination in the auditorium, it may appear very great. A good example is provided by comparing the apparent brilliancy of an incandescent light seen (1) in a room painted black throughout, (2) in a room where light walls prevail, (3) in broad daylight, each surrounding condition providing the reason for the decrease in glare from the light source.

The position from which the spectator views the motion pictures is a matter of considerable importance. The nearer to the center of the house one sits, the better the picture will appear. In order to avoid eyestrain, one should never be nearer to the screen than twenty feet, and the farther back the better. Seats placed far to the side should always be avoided, as the pictures view from the sides are almost certain to appear distorted. Many builders have taken this item into consideration when drawing plans for motion picture theaters.

Unsteadiness in the pictures due to bad "direction" in the acting, poor photography, film blemishes, and poor projection are all causes of eyestrain, and are inexcusable, because entirely preventable. The rapidity with which changes occur on the screen, producing rapid, jerky motions of the picture, may call for a greater agility in the process of focusing the eye than nature can produce. Inexperience or lack of care on the part of the camera man may result in certain sections of a photo drama being out of focus, which always proves most trying to the spectator. Films should not be used after they have become scratched and "rainy." The life of a film in constant use is but a period of a few months even under best conditions, and it is likely to show deterioration after but a few showings if operators are not careful in handling, packing, shipping, etc. The showers of light spots produced by scratched and wornout films cannot help but cause eyestrain, which may show up in headaches the following day or even result in permanent injury to the eyes. "Poor projection" is responsible for many deleterious eye conditions. In order to produce that steadiness which is most desirable, the projecting machine should be mounted on a concrete, or some other equally rigid, foundation.

More serious than any of the foregoing possible causes of eyestrain, and one which is most generally apparent, is the "flicker," which unfortunately will be readily noticeable in most of our motion picture houses. It is due partly to faulty mechanism of the projecting apparatus, and, again, to the failure of the operator to properly adjust his machine. Unless the shutter is adjusted to the finest point, so that the tiny segment of film which separates the little pictures is accurately cut out at the proper moment, flicker will result. It is a fault which involves the basic principle of motion picture projection, both mechanical and including the personal equation.

The effect of flicker is confined to the involuntary muscles which control the action of the iris. The natural action of the iris is to close very rapidly and open slowly, regulated by the amount of light which is seeking entrance to the part of the eye which will, in its turn, transmit the image to the brain, and thus form the picture in the mind. When looking at a motion picture, the pupil is contracted to a somewhat smaller opening than when viewing a still picture having the same illumination, and, when the flicker in the motion picture is pronounced, the pupil of the eye can be seen to tremble slightly as if attempting to follow each fluctuation of light. This may lead to overstimulation and permanent injury. One investigator, in commenting on this particular point, concludes by stating that this constant contraction and dilation should strengthen the muscles involved, and so eventually develop them to the point where strain would not be caused. From this opinion, however, leading ophthalmologists differ, and believe that the fatigue caused by overstimulation due to flicker frequently passes beyond physiological limits and must eventually produce deterioration.

Dr. Ellice M. Alger, of New York, in commenting on this point, writes as follows: "The whole process of con-

traction and dilation of the pupil normally requires a certain amount of time, and the rapid variation in light intensity which produces flicker applies and removes the muscular stimulus more rapidly than the muscles can respond, so that the result is a state of constant oscillation which is not synchronous with the actual variations in light intensity, and which brings about fatigue and a state of nerve exhaustion from the too rapid discharge of nerve impulses. Actual time measurements of these pupillary fluctuations have been made, and it has been shown that, when the eye is kept in the dark and illuminated by a flash of light, the reaction of the pupil is delayed for something like half a second. The contraction follows, and the pupil does not begin to dilate until a lapse of about ten seconds. Such movements are altogether too slow to follow the flicker of a motion picture which has a rate of about ten per second.

Finally, the effect of constant, prolonged concentration must be considered as a possible cause of eyestrain from the motion picture. The statement has occasionally been made that motion pictures should be no more productive of eyestrain than viewing the constantly changing panorama of country from a train window. Such a statement is doubtless based on the belief that, if our eyes do not tire when watching scenery change at the rate of about 3,500 feet per minute (the train's speed being forty miles an hour), they should not tire in watching a picture change at the rate of but seventy feet per minute (the average speed at which films are run). The theorist has evidently failed to take into consideration that the foreground of nature is in colors least apt to tire the eyes, and, moreover and more important, there is a constant unconscious relaxation of the muscles of the eyes. On the other hand, in order to follow the rapidly changing story of the motion picture, it is essential to miss nothing. Resting the eyes for even a minute may lose an important clew in "The Mysteries of Myra," "The Perils of Pauline," et al. As many of the popular films of today are run in five reels, each reel of 1,000 feet, there is demanded constant concentration of the eyes upon the flickering surface for a period of from an hour to an hour and a half. To offset the fatigue caused by this concentration, every spectator should demand, and theater owners should make every attempt to provide, the best in screens, surrounding illuminating, seating arrangements, film, and projection. Otherwise there can be no doubt that the "movies" will be an increasing cause of affections of the eye. Very few people have perfectly normal eyes. Most of us are either farsighted, nearsighted, or astigmatic, and many have muscular defects as well. Bearing this, also, in mind, it may readily be seen that the element of continued intentness, in large measure, prevents a complete muscular relaxation, so essential to the well-being of the eyes.

In summing up the various points brought out in the foregoing paragraphs, the reader will have noted that, if conditions are as nearly ideal as they can easily be made through the installation of lighting and projecting improvements in all motion picture houses, there will not be much danger of serious eye fatigue as the result of moderate attendance at one's favorite motion picture theater. If, however, the pictures as produced under the best conditions bring about evidences of eye fatigue—such as headache, smarting or itching of the lids, sensitiveness to light, excessive flow of tears, or if circles of light seem to appear on the screen—one should lose no time in consulting an oculist.

Dr. A. W. Jernigan has recently opened a private hospital at 1320 Gaines street, Little Rock, Ark.



Conducted by ALBERT WARREN FERRIS, A.M., M.D.,
Saratoga Springs, New York.

Please address items of news and inquiries regarding The Modern Sanatorium to the editor of this department, Saratoga Springs, New York.

The Value of Exercise

The amateur athlete, returning home flushed with victory, or gratified with his success in setting a new mark on the record, perhaps carried on the shoulders of vociferous college mates, sails for a time "upon a sea of glory." Admiration, adulation, the pride of achievement, the solid satisfaction of success, are very sweet. But the cup-winning emotion thus experienced by the man of muscle is but a culmination, a climax, a high-water mark. The feeling of "condition," of "fitness," is a daily reward for the individual who keeps his muscles supple and elastic, well-nourished and firm. To be in trim, to be physically capable, is so great a daily joy that King David, the Psalmist, uses the simile, "who rejoiceth as a strong man to run a race."

The joy comes not from muscular strength alone, but from the impetus to general health that regular exercise provides—from the zest of healthy existence. Digestion, nutrition, circulation, innervation, cerebration, all demand exercise. Both in the preservation of health and in the cure of disease, exercise is a very important element of medical regimen.

Passive motion, massage, and mechanical vibration are very valuable, and in some cases are the only possible employable means. The Swedish and Zander machines furnish kneading or oscillation motions which not only arouse sluggish circulation in the groups of muscles to which application is made, but also secure the involuntary contraction of antagonistic muscular groups, which resist, oppose, or balance instinctively. These machines are all outgrowths of the genius of Pehr Henry Ling, of Sweden, the pioneer teacher of exercise.

But nothing can compare closely with out-of-door daily employment of a large part of the entire bodily musculature. Even if limited to gymnastics, when denied opportunity for sports, the exercise should be taken out in the air.

Dr. James Mackenzie, of London, writes: "It may be laid down as a general law that every organ in the body is benefited by the exercise of its functions. The benefit does not accrue merely by the exercise at a low level, but by periods of increased effort followed by periods of comparative rest."

Dr. Arnold Lorand, of Carlsbad, Austria, writes, after recommending exercise of various forms and degrees to seekers after health: "The great advantage of the various kinds of sport and of walking, climbing, and running exercise is that several other agencies can be combined with them that are very important in the treatment and prevention of the effects of old age. These are fresh air

and sunshine. We think that the combination of the three agencies—exercise, fresh air, and sunshine—is the best and most necessary means for the preservation of youthfulness and for the prolongation of life."

Dr. E. Heinrich Kisch, of Marienbad, Germany, in giving general advice to invalids taking the "Kur," writes: "Moderate exercise and walking alone is what leads to the hoped-for result; one must never walk till weariness sets in."

Dr. Louis Faugères Bishop, of New York, writes in his book on the treatment of arteriosclerosis: "The circulation is dependent upon the proper accomplishment of the functions of the lungs, stomach, intestines, liver, and kidneys. What is the best stimulant to the lungs? Exercise. What most promotes the tone of the digestive organs? Exercise. What best overcomes a torpid liver? Exercise. What is the best diuretic? Exercise."

In a strikingly interesting and valuable brochure entitled, "The Factor of Safety," Dr. John H. Kellogg, the head of Battle Creek Sanitarium, writes: ". . . Those who neglect to maintain heart and lung activity by daily bodily muscular exercise out of doors, . . . such persons are rapidly using up their safety margin, which, when once lost, can never be regained."

A form of exercise which is of great value to certain carefully selected cases of heart disease consists of walking up increasing grades, according to a schedule prescribed from day to day by the supervising physician. These exercises are emphatically for the patient whose heart is in good working order, and for him alone; they constitute a variety of training at the end of treatment, and put the convalescent patient on his best plane. This system of heart and arterial exercise was devised by Stokes, of England, and elaborated by Oertel, of Germany, and is often called the Stokes-Oertel hill-climbing system, or Terrain-Kur. Few medal winners in running competitions experience greater satisfaction than that described by formerly feeble patients, to whom a level half-mile was once a formidable test. Perhaps pale, panting, suffering palpitation, and showing signs of great fatigue, they struggled through the brief distance before treatment, while after the close of their series of baths, diet, exercise, and rest, they scale the prescribed acclivity with delight, glowing with satisfaction, and sigh for higher peaks to conquer. Opportunity for such after-training is provided, among a few places, at the Glen Springs, Watkins, N. Y., in the pine woods and on the sunny slopes of the hill adjacent to the establishment. They will also be made available in Geyser Park, Saratoga Springs, N. Y., before long.

Many of us are so limited in our daily lives as to be unable to devote any time to out-of-door exercise except on Sundays or during the vacation period. But we can all take fifteen minutes a day, whether young or old, half-ill, driven by duties, or crushed by circumstances. We cannot afford not to exercise if we aim to perform our duties or to cope with circumstances, or even keep in ordinary condition to withstand disease.

J. P. Müller, a Danish lieutenant of engineers, who weighed four pounds at birth and struggled through a puny childhood, became a noted athlete of great muscular power, a model of health, and physically the most perfect man the Danish painter, Carl Bloch, ever saw, as he averred; and this through systematic exercises, which he advocates, and which may be taken in fifteen minutes daily. Without apparatus, without more instruction than his physician gives, the daily physical culture routine of the citizen may be pursued. Naturally, it is hard to go through a schedule of exercises in cold blood and alone,

while in groups or classes in a sanatorium interest is keen, and enjoyment is maintained easily.

But a simple list of maneuvers can be negotiated by everyone who has regard for his vigor. In these days of prolapsed abdominal walls, intestinal toxemia, stasis, and mineral oil, the most important single exercise is that for the muscles of the abdomen, and incidentally for the circulation of the abdominal viscera. Of course the bedroom window has been open all night, winter and summer. If there are more windows, open them also. Lie upon the back on the floor, with the toes hooked under the bottom or side of the bedstead, and rise to a sitting posture four times. Slide away from the bed and grasp each knee in turn, doubling it firmly on the abdomen four times, while still on the back. Then embrace both knees and flex both together on the abdomen four times. Then repeat all these exercises. Rest. Next, place the locked hands under the neck while lying on the back, and arch the body upwards so that the frame rests only on shoulders and heels. Do it four times and repeat after a brief rest. Stand with feet turned out and heels touching, hands placed on hips, chest up, and bow rapidly and vigorously to the waist level six times. Then tilt to left six times, then to right six times, then bend backward as far as possible six times. Still in same position, rise on toes, head and chest up, ten times. Then rise on heels ten times. Spread the feet a little apart and sink until squatting on the heels six times, springing up to the erect position vigorously. Standing with heels together, toes turned out, advance the right foot diagonally, right knee bent, raising the arms extended to level with shoulders, the while inhaling deeply; restore the foot and exhale slowly as the arms are dropped. Perform similar motions with left foot advanced; then with right foot placed behind diagonally, and then with left foot also so placed. Repeat four times. This will give you a start for the day, which, together with the daily and never omitted bath, will instill vigor and awaken circulation.

Better still, of course, is to take a shower bath while warm and just out of bed, dress properly and proceed out of doors, to take rapidly a set of light exercises like those led by the physical directors of the Battle Creek Sanitarium, where a hundred or more guests and patients assemble every morning at 7 o'clock. In rapid succession are repeated arm, wrist, hand, and shoulder movements; breathing exercises; movements for feet, legs, and thighs; hopping, running, and jumping; stepping, stepping with arm movements, "mowing," and more breathing exercises with arms rotating.

Together with increased bodily function and augmented health, exercise brings with it agility, confidence, and grace.

ALBERT WARREN FERRIS.

An annex to the Wilkes-Barre City Hospital, Wilkes-Barre, Pa., to be devoted exclusively to private patients, has recently been completed. The building is a three-story structure of red brick, arranged to accommodate 40 patients, and the cost, including equipment, is understood to be approximately \$200,000. All of the modern comforts and conveniences for patients usually afforded by first-class private hospitals have been provided, and the equipment for treatment is complete and up-to-date. All of the rooms are large and cheerful, and there are suites of three rooms, elegantly furnished. A feature of the rooms abutting on the corridors are the double doors, consisting of the usual door and one with a lattice arrangement covered with muslin, which stands outside and serves as a screen for the patient when the main door is open. The maternity section of the annex is so placed that it may be practically shut off from the rest of the building. Plans for the structure were drawn by Architects Sturdevant & Poggi, of Wilkes-Barre.

A CONVENIENT DIET CHART

Brooklyn Hospital Has Devised Colored Chart Which Doctors and Nurses Have Found Practical

Even though each hospital has its own method of serving diets, a description of one which has proved most satisfactory may be of interest. In the following system each diet is indicated by a color, as green, house or full diet; blue, light; yellow, soft; white, fluids; lavender, fast or fluids without milk; red, special—nephritic, diabetic, etc. On small cards corresponding in color to the diet ordered is written the patient's name. These cards are placed on the patient's food trays before meals are served and remain there until the tray is placed before the patient.

The illustration shows the way the diets are divided under their distinctive colors. When a patient is admitted and diet ordered, the patient's name is written on a white card and put under the proper heading. If the diet is changed, all that is necessary is to transfer the card to the new heading. A space is provided for "nourishments" and "nothing by mouth."

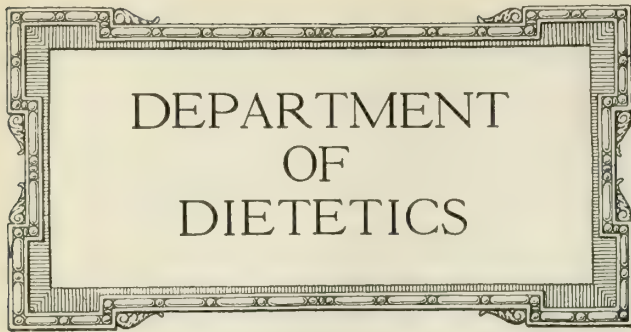
This has been found helpful to the doctors also, as it is kept at the head nurse's desk, except when meals are

DIET CHART & INDICATOR				
HOUSE	LIGHT	FLUIDS	SPECIAL	SPECIAL DIETS
⌋	⌋	⌋	⌋	⌋
⌋	⌋	⌋	⌋	⌋
Mrs. J. Brown 234	⌋	⌋	⌋	⌋
⌋	⌋	⌋	⌋	⌋
⌋	⌋	⌋	⌋	⌋
⌋	⌋	⌋	⌋	⌋
⌋	SOFT	FAST	NOTHING BY MOUTH	NOURISHMENTS
⌋				
John Doe N ^o 4	⌋	⌋	⌋	⌋
⌋	⌋	⌋	⌋	⌋
⌋	⌋	⌋	⌋	⌋
⌋	⌋	⌋	⌋	⌋
⌋	⌋	⌋	⌋	⌋

Brooklyn Hospital's new dict chart, employing colors in headings.

being served, and at a glance they can ascertain each patient's diet. The chart is made of a light gray card-board, divided into the spaces required. Oblong clips are put through, pointing upwards; these are fastened flat on the back, with strips of adhesive. The cards slip in easily and are held securely.

Dr. Stephen W. Stafford, of New Orleans, will assume the superintendency of the Charity Hospital, that city, October 1, succeeding Dr. C. D. Wilkins, who has had charge of the institution for the last four years.



Conducted by MISS LULU GRAVES,
Dietitian of Lakeside Hospital, Cleveland, Ohio.

Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, Ohio.

Some Institution Kitchen Problems

BY MISS LOUISE POLLOCK, Dietitian City Hospital, St. Louis.

In many state and municipal institutions large numbers of people are fed from a single kitchen. While it seems right that the expense of maintaining and curing these patients should not be great, they surely should have set before them plenty of wholesome food prepared in an appetizing way.

NEED OF SUPERVISION OF KITCHENS AND DINING ROOMS.—In such an institution there should be one person in charge of the entire dietary department. By this I mean this one should determine what is to be fed on each day, see that this food is ordered in time for preparation, that it is in good shape when it arrives at the institution, and last, but not least, that the chef properly cooks it, that it is sent to the dining rooms hot or cold as the need may be, and then that it is properly served. Many a meal is spoiled on its way to the dining room or in the dining room while being served to the patients.

In a hospital for the insane there are distinctly four groups of patients from a dietitian's point of view:

1. Those patients who work; many people who must be confined in a hospital for the insane are physically able to do much work under supervision. They should not be forgotten at meal time, for they will need more food than those patients who spend the greater part of the day sitting quietly in the ward. For the working group a little heavier breakfast should be prepared; besides the cereal, bread, butter, and coffee, they could be given fried mush, pancakes, French toast, etc. If the remainder of the patients have meat, potatoes, gravy, a vegetable, and pudding or pie for dinner, a generous helping of these should be sufficient for the workers. Then, the supper might be supplemented with potatoes or hash.

2. The infirm group needs due consideration. While for some of them we entertain little hope for recovery, they appreciate and greatly enjoy good meals. The teeth are often poor or absent altogether, or the mentality is so deficient that the food served is scarcely chewed at all. A separate diet for these persons is in order. It should be made up of foods thoroughly cooked and easily masticated. I would suggest cereals of all kinds, potatoes either mashed or creamed (having been cut in small dice); that all meat be finely cut before serving; that it be in the form of beef loaf, hash, thoroughly cooked meat stew, minced ham; that no roast meat or steak be served. We would eliminate such vegetables as green corn and green beans, but many of the other vegetables, if cut fine or mashed, could be served. All the soft puddings could be used.

3. The proportion of "sick" patients is usually small, so that they ought to be afforded the real "sick diet." If these patients can be grouped together so that one diet kitchen can serve both men and women, or one diet kitchen can be placed on the male side and one on the female side of the institution, much good will be accomplished. While it is not advisable for various good reasons to have store rooms on the wards, each institution should provide a way for preparing food for its physically sick. To these people should be given the best and daintiest food to be obtained—fresh fruit in season, eggs, steak, chicken, good puddings, and as many appetizing dishes as it is possible to prepare. While in serving this there is constant danger of having all the dishes broken and the linen on the tray torn to shreds, by careful watching of the nurses some of these dangers may be obviated.

GENERAL DIET.—Most of our insane are able to come to a dining room to eat. They enjoy a good meal just as you or I do. The problem of preparing and serving this good meal is not a small one. We grow into the habit of serving, say, stew every Tuesday for dinner and rice every Thursday night for supper, instead of giving the people a surprise occasionally. It is true, we buy in large quantities, and it must be contracted for in advance; but with the mechanical devices now on the market we can change our ways of cooking even the same old things and thereby give considerable variety to meals. Think of it! Suppose you yourself ate plain boiled potatoes or potatoes boiled in their jackets 365 days out of every 365 days. But suppose the cook has no oven in which to bake and no masher in which to mash potatoes for, say, 2,000. What, then, can be done?

Install a good patent oven of sufficient size that all of the patients may have baked potatoes, baked beans, browned potatoes, and similar things as many times a week as it seems advisable. Then have the baking pans made so that they will fit into the food boxes which go to the ward dining room or the general dining room. By the time nicely browned baked beans have been emptied from the baking pan into a serving pan and again served in the dining room, they are far less appetizing in their appearance than they would have been if another scheme were in use. The cost of building an oven would not be small, but, if properly built, its cost of maintenance would be but little. To be able to provide baked fish, fried ham, etc., for the patients is worth the effort.

The serving of mashed potatoes to 2,000 means an enormous amount of work. It generally means that the potatoes are poorly mashed and invariably reach the patients cold. Some of this can be obviated by installing a motor-driven potato masher. There are several makes, but choose the one that provides several bowls, so that the bowl need not be emptied every time a bushel of potatoes is mashed. Of course, the milk, butter, and salt may be added while the potatoes are being mashed. Most of the machines are supplied with various "arms" for different attachments, so that the thickening for gravy may be made and different batters mixed.

MEAT CHOPPER.—Next the kitchen needs a motor-driven meat chopper. These choppers are made in various sizes, and built so that the meat may be chopped fine or coarse as the chef may wish. After such a machine is installed, the patients may easily have meat loaf, hamburger steak, meat croquettes, etc. When making bread pudding or bread dressing, such a machine is especially convenient, for large quantities can be cut in a very short time.

POTATO PEELER.—The amount of waste in peeling potatoes in a short time means money. With even a well-

supervised scullery, there must be some waste. The use of a peeler means saving money. I am of the opinion that that peeler in which the parings are removed by friction is best, but a tin lining must be replaced and repaired often. While the initial cost is greater, a machine made of some rough cement bowl would be the best make. Such vegetables as carrots and turnips could also be pared here.

VEGETABLE SLICER.—For slicing onions or other vegetables in thin slices, a small hand-driven machine saves time. It should have a permanent place in the kitchen, for it will be used daily.

The power-driven ice cream freezer is quite an addition to the kitchen equipment, but, together with the other machinery mentioned, should be placed in a room adjoining the kitchen.

Assuming that the kitchen is supplied with a range, square steamers enough to steam all the vegetables with steam-jacketed aluminum kettles for cooking fruit and cereals, and iron steam-jacketed kettles for making soups, stews, pot-roasting and boiling meats, and the small equipment, such as pans, racks, tables, sinks, etc., the chef should now be able to put out meals of variety.

BAKESHOP.—There is need of a good patent oven first. By a good patent oven I mean one which may be fired to different temperatures for the baking of bread, cake, biscuits, pies, etc. Of course, the oven to be chosen is not one in which gas from the fuel comes in direct contact with the baking food. In case coke is burned, a rear-fired or basement-fired oven has the great advantage, for the shop does not get so dirty from the fuel.

If the institution is large enough, so that it is worth while to bake bread, it is worth while to have a power-driven dough mixer in the bakery. In spite of the patient labor which may be available, the mixer should be used, because it is much more sanitary.

We all know that sifted flour "goes farther" than that not sifted. Then we find that quite an appreciable amount of debris of different kinds is sifted out of flour. Now, to expect the baker to sift, say, five barrels of flour daily is too much; in fact, he will not do it. He should be supplied with a power-driven sifter which sifts the flour directly into the mixer. If the flour is stored on the same floor with the shop, the sifter may be combined with a flour elevator to raise the flour above the mixer and sift into mixer. If the flour is stored on the floor above the bakery, it may be easily sifted down. In remodeling or building a shop, remember that in case there is not sufficient room to store the entire supply of flour in the shop, a warm flour room, holding several days' supply, should be provided, so that the flour will be warm and dry.

There are certain automatic devices now on the market to help with the measuring and weighing of the water and flour respectively. A measuring and tempering tank for the water which is to be put into the dough is well worth while. The baker knows how much bread he must make and how much water a given amount of flour should take. In making good bread, the temperature of the water has much to do. Install one of these devices above the mixer and save the baker carrying water to the mixer. For the sake of exactness, an automatic weighing device should be installed, so that the baker may make no mistake in putting in the flour. Commercial bakeries find these helps a necessity in these days of high costs and close competition. If it is worth while to them, it is worth while to those of us who oversee the expenditure of other people's funds.

Steel troughs in which the dough is placed to rise should replace any wood troughs now in use. They are much

more sanitary, require less work to keep clean, and consequently are more apt to be kept clean. After the dough has been mixed in the mixer and allowed to rise in the troughs, it is cut into pieces to be molded into loaves. Machines for cutting this dough do not seem practical for institution use, but kneading machines for kneading the dough are great labor savers. By installing such a machine in an institution of, say, 2,000, one baker less will be needed to get out the bread; so the machine would pay for itself in a little less than a year. Aside from this fact, the bread is uniformly and thoroughly kneaded and is surely more sanitary. The time required for kneading bread is greatly lessened, the exact time depending on the number of loaves, the kind of machine, and the efficiency of the operator. Besides this, the baker can mix a large batch of bread at one time without its getting "too old" before he has time to mold it.

A cake mixer is provided with many sized bowls and beaters of different kinds, so that butter may be creamed, batters of different consistencies may be mixed, or eggs may be beaten. The time required to mix cake for 2,000 is very short. Aside from this, there are no lumps and the texture is better than the best baker can make by hand.

We say cookies are just the same as cake, but they are not. Patients eating year after year at the same table enjoy the different cookies—ginger, sugar, soft, oatmeal, etc. Within less than an hour one man can, with the aid of the mixing machine and a power-driven cookie cutter, prepare as many cookies as two men can prepare in half a day. This helps very materially in introducing variety into the menus.

The bakery needs a small gas or coal cooker or stove, where the baker can prepare pie fillings, etc., instead of depending on the institution cook to do this.

BREAD ROOM.—After removing the bread from the oven, it must be thoroughly cooled and then stored. If the bread is cooled on portable, galvanized iron racks, it can then be pushed directly into the storing room. If covers are made for these racks, they can be rolled on out to the ward elevators without a second handling.

When the kitchen and bakery are equipped, we have only started. Constant care must now be taken to keep all this in order; constant prodding is necessary to induce the kitchen help to use these devices with the proper respect.

Wheat Flour and Bread Costs

BY G. L. TELLER, M. S., the Columbus Laboratories, Chicago, Ill.

[Continued from the September issue.]

The present high price of flour and other articles used in breadmaking has led to much discussion recently in the daily press concerning the cost of bread and the necessity of reducing the size of loaf to meet the increased expense to the baker. A consideration of the cost of bread made in small lots by the housekeeper and by small hospitals is, therefore, very appropriate at this time.

Bread, as ordinarily consumed, contains a considerably larger proportion of water than does the flour from which it is made. Three 5-cent loaves of bread purchased in the open market, made by different representative Chicago bakers and wrapped by them in waxed paper, were found on determination to contain 30 percent of water. Flour ordinarily contains about 12 percent of water. As sold to the family trade, it probably does not often contain more. This indicates an increase in weight, due to the water in the bread, of 25 percent over the weight of flour used; that is, 48 ounces of flour will make 60 ounces of bread. On this basis we can calculate the cost of the

ingredients which are used in a loaf of bread at the present market prices in Chicago as these ingredients will ordinarily be purchased by the housewife. These ingredients include flour, salt, sugar, lard, and yeast. The present prices in a large retail store are as follows: flour, in 49-pound sacks, \$2.27, equivalent to a little more than \$9 per barrel; lard, in 5-pound pails, from 70 cents to \$1.19, depending on quality and brand—a fair average price for lard would therefore be 17 cents per pound; granulated sugar, 7 cents per pound; best table salt, 10 cents for 10 pounds; ½-ounce cake of compressed yeast, 1 cent per cake.

Flour as sold to the family trade in Chicago consists almost wholly of the better grades of hard wheat patents, such as Pillsbury's Best, Gold Medal, and Ceresota. These represent about the best breadmaking flours that can be purchased, and few, if any, of the stores carry flour that is of a cheaper grade.

Lard is used by many in the making of bread, either as one of the ingredients, or for greasing the crust of the loaf before baking, or for greasing the pan; sometimes for all of these purposes. The prices given above are for high-grade lard. Lard substitutes, like Cottosuet and Cottoline, can be purchased at less cost, and will serve the purpose in breadmaking as well as the best lard.

Good bread can be made without the addition of any sugar, but better bread can be made by adding a small amount of that material. The housewife will ordinarily use granulated sugar, and this can really be purchased at less cost than the unrefined yellow sugar.

Two kinds of yeast are in common use—compressed yeast and dry yeast, such as Magic Yeast or Yeast Foam. Either of these give excellent results in breadmaking when used according to directions.

No schedule of the cost of bread would be complete without a consideration of the cost of fuel necessary for baking. In the summer time gas ranges are in common use in Chicago and other large cities. According to data given by the manufacturer of one of the best of these stoves, an 18 by 18-inch oven, heated with two burners, will require 20 cubic feet of gas to keep it at baking temperature for one hour. This will cost, therefore, approximately, 2 cents for the baking of a batch of bread. Where smaller quantities of bread are baked, smaller ovens can be used, requiring considerably less gas for heating, and, where larger quantities are baked, larger ovens can be used with probably considerable saving in the proportionate amount of gas used. In families and hospitals where coal ranges are used, little additional fuel will be required during the winter months to produce the heat necessary for baking bread, so that in such instances the cost of fuel would be negligible.

With these facts in mind, we may calculate the necessary outlay for material and fuel for the making of bread on a small scale. A convenient quantity to bake from the standpoint of economy will be 3 pounds of flour. This will require 1 cake of compressed yeast. To this we will add 1 ounce of sugar, ½ ounce of salt, and 1 ounce of lard. The cost, when tabulated, will show as follows:

Flour, 3 pounds at \$9 per barrel, 4.6 cents per pound, equals.	13.8 cents
1 ounce sugar, at 7 cents per pound, with ½ ounce salt, equals	.5 cent
1 ounce lard, at 16 cents per pound, equals.	1 cent
1 cake yeast	1 cent
Gas for baking one hour.	2 cents
Total.	18.3 cents

From data given above, it will be seen that these ingredients will make 62½ ounces of bread. One cent will, therefore, furnish material and fuel for 3.4 ounces of

bread, or 10 cents will buy the necessities for 34 ounces of bread. Deducting the cost of fuel necessary when gas is used, we shall increase the amount of bread for 10 cents' worth of necessities to 38 ounces. This cost will be materially decreased with every decrease in the price of flour of \$1 per barrel, and, when flour is selling at \$7 per barrel, we shall have, without allowing for cost of fuel, a yield of 47.3 ounces of bread for 10 cents of the above necessities. The price of the other ingredients has of late not varied materially throughout the year.

In the above no reference is made to the cost of labor. The actual amount of time required for baking a batch of bread like the above, as it will ordinarily be done in the household, is from one to one and one-half hours. This is extended over a period of from four to five hours or longer, depending on the length of time necessary for producing the bread, and is, of course, ordinarily interspersed with other work in such a manner that no material time is lost from either. To the housewife who is doing her own work, and takes a pride in it, this amount of labor used in the baking of bread would not be seriously felt. If, however, we calculate the cost of this time at the current rate of domestic services in Chicago, which amounts to \$7 a week, and often more, without any allowance for board and room, we shall have to pay for these services at the rate of about 10 cents per hour; or, allowing a just estimate for the additional cost of board and room, we shall pay at the rate of 20 cents per hour, so that the cost of the time necessary for making the 62½ ounces of bread would be at a minimum equal to the cost of the material itself, and, when flour is \$9 per barrel, we should receive for 10 cents of expenditure only 17 ounces of bread. In hospitals, where the amount of bread baked is larger, the proportion expended for the cost of labor would, of course, be much less.

From the standpoint of cleanliness, wholesomeness, and food value, there is nothing to choose between bread produced at home and that produced in the modern bake-shop. It is to be assumed that in all these particulars the conditions are reasonably good. Bakers' bread may be obtained fresh daily. The housewife will bake two or three times per week, according to conditions. She will have no difficulty in keeping the bread this length of time if she bakes it herself, but, strange as it may appear, she demands that the baker's bread shall be absolutely fresh, and this demand helps to materially increase the expense of the commercial breadmaker because of the loss on stale bread which is returned to him.

At first thought, taking into account the fact that the commercial baker obtains his material at much less cost because of purchasing in larger quantities, it might appear that bakers who are urging the increase of the cost of bread, so that they shall sell a pound and a quarter, or less, for 10 cents, may be exacting too much of the consumer, but it must be borne in mind that a considerable part of the cost of bread purchased at the market is to be charged up to the selling end. The grocer who handles the bread receives the sum of 1 cent for the trouble of selling a 5-cent loaf, which often includes the expense of a delivery boy, horse and wagon to send it a distance of several blocks. The cost of labor is continually increasing, the plant is depreciating in value, and there are many other expenses which do not appear in the making of bread in the household. On the other hand, the woman who wishes to economize in her household expenses, and who has the time and inclination to do the necessary work, will find pleasure and some profit in making her own bread.



A PROTEST? OR A NEW PRINCIPLE?

* * *

An Interesting Movement in Welfare Work

In the town of West Frankfort, in Franklin county, southern Illinois, a 65-bed hospital is nearing completion and is expected to be opened about November 15. Not very much attention has been paid to this little hospital, and the significant movement behind it seems not to have been recognized even by those who are responsible for it; but it seems to be either a temporary protest or the beginning of a new era in industrial welfare in this country.

The town of West Frankfort, with its environs, has 10,000 people. There are five coal mining corporations taking out coal there, which employ a total of approximately 2,500 miners. There are about ten doctors in the town, some of whom are irregularly employed by the coal mining corporations to take care of the accidents that happen in the mines.

Two or three years ago the officers of some of the local miners' unions became disgruntled over the treatment of some of their members by the corporations. They claimed that inadequate care was given to those who were hurt, and that settlements were forced from them while they lay ill of their injuries. This discontent grew until finally there came out of it a definite proposition from some of the "locals" that the employees in the mines ought to have their own hospital, conducted under their own auspices by their own medical attendant, and paid for out of their own funds. To bring about this end, meetings were held by the different locals, and resolutions were adopted by which the unions loaned to the members a fund sufficient to build a hospital to cost approximately \$50,000, and it was agreed that the members should pay back this fund at the rate of 25 cents per month each, and that, in addition to this assessment, each member of the unions was to pay \$1 per month for hospital medical and surgical care. Miners' families were to be treated surgically for moderate fees by the hospital staff, and the medical staff service was to be given to the miners' families free.

Immediately after the passage of these resolutions a special committee was appointed, composed of members of the various unions, to go ahead with the plans for the hospital and with its construction. A contract was then entered into with four physicians, of whom Dr. Frederick Greenbaum, formerly of Chicago, was chief and spokesman, the terms of which contract provided that these doctors were to conduct the hospital both on its administrative and professional sides according to specific rules which were made a part of the contract. It is said that the coal mining corporations are bitterly antagonistic to the new hospital, its new medical men, and the movement generally. The hospital is now nearing completion and is being equipped. During the past year, while construction was going on, the medical group of four men who are to conduct the enterprise have made inroads on the general

practice of the community, partly by means of a small 10-bed hospital improvised out of an old residence and partly by means of exceptionally good medical and surgical service.

The whole movement which has culminated in the new hospital and its new system of operation is now beginning to attract some attention. The United Mine Workers and various state bodies have recently been making inquiry about the movement at West Frankfort, and some of those at the head of the movement have been asked to address miners' meetings in various parts of Illinois, and it is the belief of the miners' union officials at West Frankfort that their movement is to take the place eventually, among the coal mining industries, of the present method of welfare work under which the employers of mining labor have held control.

The employers at West Frankfort believe that the movement which inspired the new hospital is a sporadic one, that it grew out of a local discontent, largely personal in character, and that nothing more will be heard of it.

THE DEPARTMENT STORE HOSPITAL

* * *

Mandel Brothers, Chicago, Care for Physical Efficiency of Employees

BY D. F. KELLY, General Manager.

The employees' welfare work carried on by Mandel Brothers has received the recognition of many eminent sociologists in America and abroad, besides considerable notice in newspapers and magazines. Scores of appreciative letters have congratulated this house on its recognition of the purely human needs of employees.

Important features of the Mandel welfare program are the employees' lunch room, where wholesome, substantial food is served at about cost; the commissary, where dry groceries are supplied at net wholesale quotations; the 10 percent (or more) discount allowed employees on purchases in all departments of the store; the two weeks' vacations and Saturday afternoon holidays during the summer. Mandel Brothers "Store News," published fortnightly in the interest of employees, affords them much helpful information and advice. But the most important element in all the welfare work is the hospital, with a competent physician in charge.

Mandel Brothers were among the pioneers in the field of department store hospitals. They equipped a modern emergency hospital and installed a doctor and a nurse when many other stores had not emerged from elementary methods of first aid. The function of Mandel Brothers' hospital at its inception was the care of customers who became ill while shopping and of employees who met with accidents. However, as the great possibilities of employees' welfare work were unfolded, the employees' interests superseded those of the customers. The hospital now cares for everyone who becomes ill or is injured in the store, and offers free treatment to all employees who wish it. It contains a waiting room, an examining room, a dressing room, a men's "ward" with one bed and a women's ward with three beds. There are ample facilities for performing simple operations, and, should the occasion arise, the patient could be kept overnight. Perfect asepsis is maintained, and a generous supply of standard drugs is always at hand for free distribution.

Since the majority of department store employees are women and girls, a woman physician is in charge of the hospital. She is able to secure the confidence of the women employees and to give them valuable aid and per-

sonal advice. Often she is called on to act as an intermediary between the employee and the employer, and is able to straighten out matters of a delicate nature. On the average, 75 patients are treated per day. During the hot summer months just passed there often were as many as 125 cases in a day. It may be mentioned in passing that Mandel Brothers maintain an expert chiropodist, whose services are given to employees at a nominal cost.

The Mandel medical service is of much broader scope

from any other source, the house pays the expenses of the funeral.

Incalculable benefit is rendered employees by apt suggestion, and instructions in hygiene and health. "What do you eat?" is one of the doctor's stock questions. In short, the Mandel hospital cares for the physical well-being of employees, and, in addition, throws about them every safeguard, moral and physical, that is possible without violating anyone's individual freedom.

A BRIEF FOR HEALTH INSURANCE

* * *

National Association for Labor Legislation Argues in Bulletin for Better Medical Care for Wage-Earners

A death rate for American wage-earners twice that of professional men, the prevalence of high sickness rates, the need among workers of better medical care and of a systematic method of meeting the wage loss incident to sickness, and the necessity for more active work in the prevention of disease—are the corner stones of the case for compulsory health insurance presented in the brief just published in New York by the American Association for Labor Legislation. This situation, it is pointed out, cannot be met fully by existing agencies, and can be properly remedied only by a system of health insurance embracing all wage-earners and dividing the cost among employee, employer, and the state.

The great amount of sickness in the homes of the poor causes an average loss by each wage-earner of nine days a year, and involves annually a national wage loss of approximately \$500,000,000. Notwithstanding the greater prevalence of tuberculosis among wage-earners, their early susceptibility to the degenerative diseases of middle life, and the excessive death rate among the industrial population, workers often are unable to secure the medical attention they require. In Rochester, N. Y., it was found that 39 percent of the sickness cases were not under a doctor's supervision; in a city like Boston, Mass., one-fourth of the population, it is estimated, are unable to pay the fees of a private physician.

The lowered vitality and the poverty created by present-day conditions, it is claimed, can be checked only by a system of health insurance, which, for a small sum divided among employer, worker, and state, will bring medical care to the wage-earner and his family, will assure for a maximum of twenty-six weeks in a year a weekly payment of two-thirds of wages during the breadwinner's illness, and in addition a small funeral benefit should he die. "Compulsory health insurance," concludes the brief, "is an economical means of providing adequately for the sick wage-earner, and will prove a mighty force for the inauguration of a comprehensive campaign for health conservation."

MAKE MEN AS WELL AS GOODS

* * *

H. Black & Co., Cleveland, Ohio

BY HUGH FULLERTON, M. D., Medical Director.

The old-time phrase, "I am not in business for my health," is fast losing its significance; in fact, the reverse statement is coming into prominence. As the value of each employee becomes apparent to industrial institutions, the scope of the nurse and the doctor in the institution has broadened to such an extent that it is now not merely curative, but preventive as well. Health and sanitation work in factories, in its inception, was merely an attempt



Fig. 1. Mandel Brothers' hospital. Examining room.

than is afforded by the facilities of the hospital. For example, a competent investigator visits the home of every boy or girl, young man or woman, who enters Mandel's employ. She reports on the neighborhood in which the applicant resides; the home affairs, when they can be learned; the number of dependents, if any; the income of other members of the family. If applicant is boarding, the character of the boarding-house is looked into.

When employees are ill, it is the duty of the house



Fig. 2. Mandel Brothers' hospital. Women's ward.

physician to visit them and report promptly as to their needs. When it is desirable that employees be sent to a sanatorium, the expenses of such employees as have been with the house for a year or more are frequently paid by Mandel Brothers. The house assumes full cost of sick benefits up to two weeks' full pay, or, in the case of urgent need, as much more as may be necessary to place the employee in physical condition to attend to his or her duties. In case of death, when funds are not available

to cure injuries occurring during working hours. The factory nurse or the doctor felt that their main function was to prevent infection following injuries, and to relieve suffering after the injuries had occurred.

To this rather limited field of effort has been added, as an additional function, the investigation of causes for injuries and the recommendation of safety appliances. Many of the more intelligent industrial corporations go even a step farther, and argue that physical injury is only a small part of the cause of temporary disability, and are now instructing the factory health officers to inquire into more chronic diseases. To this end there has been established, as a distinct branch of the factory medical service, a physical examination, which is, after all, nothing more than a physical inventory. The justification for this examination lies perhaps in the realization that many of our industrial misfits are the result of an improper placement.

Each employee represents an actual investment, an investment of time and effort, in teaching him the company's system, which, when translated into terms of reduced production and wasted material, can be stated in dollars and cents. The problem of employment is thus a little more significant than merely finding men to fill jobs. It is now considered more important to find the particular job which the prospective employee is best fitted to fill, thus reducing the labor turnover, which is so expensive in its indirect results. One of the primary qualifications to be discovered is physical fitness. So it is that the factory medical officers should play a large part in the selection of the employee. Frequently employees are engaged who do not entirely measure up to the physical standard. The examining officer, however, may feel that, by proper treatment, whatever defect exists may be corrected, and a course of treatment prescribed oftentimes as a requisite of employment, so that the subsequent consultations with the doctor and nurse may be regarded as a part of the employee's training.

After all, the problem of health and sanitation in factories is not unlike the problem confronting health departments in municipalities. The greatest amount of good can be accomplished, not by an enforced treatment, except in so far as the lack of treatment would be injurious to others, but by a thorough program of education. Teaching employees, and their families as well, the value of proper physical and medical treatment is an essential part of a factory health campaign; hence much of the time of the doctor and the nurse is spent in personal hygiene talks with employees, especially where a large percentage of women is employed. Every factory paper should contain occasional articles by the doctor or nurse—bulletins may be printed, or short articles on specific subjects inserted in the pay envelope. This can be made particularly effective if brought close to home by illustrating the points raised with references taken from the factory experiences.

The value of carefully kept records becomes apparent at once. It is quite possible to discover preventable causes of loss of time if the occurrences be noted, not as isolated cases, but in a total over a period of time. Thus it was found in one institution that frequent headaches among girls in the late morning occurred because of the lack of breakfast. The company established a breakfast period, and as a result the loss of time was reduced to a considerable extent. Many institutions furnish slippers, dry stockings, and umbrellas to employees to prevent colds, which would reduce the efficiency of the employee or might cause an enforced absence.

Factory executives are often asked how the employees

in their institutions regard the work of the factory nurse and doctor. We hear the word "paternalism" used frequently in connection with a factory health department, and are led to believe that the work is looked on with suffering and sometimes even suspicion by employees, who subconsciously reason that they would prefer to have the money so spent put into their pay envelopes. The answer to such a query must necessarily be an indefinite one. The success or failure of the efforts of the factory nurse is dependent in a great measure on her personality. It is quite within reason to believe that employees would be easily offended by questions of a purely personal nature, unless these questions are asked in a spirit of friendliness and helpfulness, which will at once disarm suspicion. The factory doctor and nurse must see a human being whenever they make an examination. It may be said that the ideal physician is a purely impersonal one, but no one can imagine a purely impersonal patient. The doctor or nurse who examines his patient and sees only an interesting disease will not make a success. If, on the other hand, he can make his relation as personal as possible, the cooperation which he will receive will be gratifying.

The factory lunch room has before it not only the problem of serving good food at reasonable prices, but also the distribution of a bit of food education. To those institutions which employ a large number of female help the problem of food education is a vital one. The majority of girls leave the institutions to be married, and, in so far as they can be taught simple rules of food value, they can be made more efficient housewives, the community bettered, and in the end the institution responsible for the education will feel the good results.

Every manufacturing institution has before it two distinct problems—that of making honest, salable merchandise, and that of creating more efficient citizens. The proper performance of the first named has a direct relation to the prosperity of the company. The proper performance of the second named has an indirect relation, but a very definite one. Any organization is successful and will progress in proportion to the progress of the community in which it is located. As that community becomes more enlightened, as it becomes more healthful, so will the employment problem become less aggravating.

Each institution is, therefore, not altogether altruistic in spending time and the money necessary to educate employees in the value of health through the proper care of their bodies. The medical officers of a factory have before them the problem of human efficiency, and in so far as they can promote the healthfulness and comfort of the group with which they work, just so far can they justify their relation to the group, to the community, and to the management which they serve.

WHERE WELFARE FIRST BEGAN

* * *

John Wanamaker Store, Philadelphia, Pa.

The John Wanamaker Philadelphia Store is said to have been the first industrial corporation in this country to inaugurate and carry out seriously planned welfare work under the direction of a special officer paid for the purpose. This was twenty-five years ago. At that time a nurse, educated after the simple, crude fashion of nursing education of that day, was given practically carte blanche to do what she thought ought to be done for the employees of the store, and especially the women employees. There was a rest room for employees, with nursing service for those who became ill at work; a visiting

nurse to go into the homes and find out what the trouble was, and to relieve it if possible.

This work gradually developed, until in 1906 the medical department was organized, and at the present time more than 50,000 cases of illness of all kinds come under the care of that department annually. The medical staff consists of a consulting physician, a medical director, two assistant physicians, two dentists, four nurses, and four chiropodists. The equipment in the store at Philadelphia consists of five waiting rooms, five examination offices, a large demonstration and lecture room, a pathological laboratory, and three hospital rooms with four beds each. The dispensary, medical and surgical, is open during all the open hours of the store, and there are special clinics from 9 a. m. to 12 o'clock, and from 2 to 4 p. m. Special physicians are employed by the corporation for nose, throat, and ear cases, genitourinary disease, nervous disorders, diseases of the respiratory tract, and diseases peculiar to women. The corporation makes a special point of its examination of applicants for employment, and this examination is carried to a high altruistic point. As the result of this examination, candidates are advised as to the character of work in which they should engage, and those accepted are placed with a special view to their physical and mental qualities. Those who are rejected are carefully advised as to the cause of their rejection, and an attempt is made to advise them concerning the selection of employment elsewhere.

Concerning its employees, a watchful eye is kept to mark the approach of incipient diseases contracted by reason of city life and indoor employment, by dust-breathing occupations, and the various occupational diseases.

The corporation makes a special point of its athletic organizations; has its own bands, military companies, and outdoor sports, and for the girls has athletic instruction, calisthenics, swimming carnivals, country outings, and other forms of healthful exercise and amusement. The unique feature of the athletic agencies employed by the corporation is that the girls' and boys' athletic organizations are practically duplicates of each other, there being a girls' bugle and drum corps and a girls' band and military organization.

A marked distinction is made in this corporation by reason of the fact that very many of the 6,000 employees are young people not yet out of the growing stage, and a serious attempt is made to mold the character of employees, moral and mental, at the same time that the physical powers are in course of development. In the commercial institute, which is practically a business college, the John Wanamaker corporation gives a full business course to its employees, and, in addition, teaches many of the academic studies, such as commercial law, elocution, general literature, and the physical sciences. Another feature emphasized in the John Wanamaker stores is the summer vacation for employees. The corporation owns at Island Heights, N. J., a site of five acres on Barnegat Bay, on which it has the necessary buildings to accommodate a large number of employees at one time. This camp has been maintained throughout the

summer for the past fourteen years and has grown to be a most popular resort for the employees, and has proven itself a very important factor in the maintenance of the health and morals of the employees. The employees live in army tents at the summer camp, sleep on cots, and are under the sanitary and hygienic direction of trained medical officers. All employees of the store attend this camp for two weeks each summer, the attendance being obligatory and as a part of their duty for male employees, and is optional with females.

SANITARY EQUIPMENT AND SAFETY

* * *

Remington Arms and Ammunition Company, Bridgeport, Conn.

DATA FURNISHED BY MR. JOHN M. FRENCH.

We have a thoroughly equipped modern emergency hospital at the Remington works, in charge of two physicians, three nurses, and attendants, who treat upward of 100 cases daily. The majority of these cases, however,



Fig. 1. Remington Arms and Ammunition Company, Bridgeport. Dressing room of the hospital.

are only slight cuts or abrasions, as the company insists that in case of any other injury the man must be taken to the hospital for treatment. The hospital is furnished with three beds for emergency cases, to be used only for such a time as is necessary to detain the patient before he can be safely removed to the Bridgeport Hospital. Fortunately they have been seldom used. Stretchers are provided throughout the works, and the guards and watchmen have been trained to act as ambulance bearers.

The greatest care is taken in the plant to provide against infection from any cause. Drinking fountains have replaced cups, lavatory basins are furnished with running water, and only paper towels are allowed to be used. Cuspidors are provided in all the machine shops, and the men are educated to use them, a sanitary corps of workers being provided on each floor to keep them scrupulously clean. Another department is known as the safety first department, under the charge of a competent engineer, whose duty it is to safeguard against accidents of all kinds by the proper appliance of guards and safety devices. A section of one of the machine shops is set aside for the manufacture of these appliances.

An extensive electric dust collecting system has been installed in all abrasive and wood-turning departments, and goggles are supplied in every instance where men are exposed to the danger of dust in the eyes. These goggles are not transferable among the men, and each man must retain his own to avoid the possibility of spreading infection.

We have an excellent fire system and adequate fire escapes. The exit doors are furnished with panic locks, so that in case of fire all the floors can be promptly cleared without danger of crowding.

The restaurant is conducted on the most improved sanitary plans; in fact, no detail has been too small to receive attention when a matter of sanitation or safety was involved.

Dr. Darlington, former chairman of the New York Board of Health, delivered a lecture to the foremen of the Remington works some time ago on hygiene, in which he complimented the company highly on the thoroughness of their sanitary equipment.

BIG BENEFIT FUND BASIS OF WELFARE WORK

* * *

Eastman Kodak Company, Rochester, N. Y.

EPITOME OF WELFARE WORK FURNISHED BY MR. F. W. LOVEJOY, General Manager Manufacturing Department.

The basis of the company's welfare work is the provision of a fund of \$1,000,000, the income from which is used for the payment of accident compensation, sick benefits, and pension to its employees. No set pension or sick benefit plan is followed, each case being considered on its own merits. Length of service and the necessities of the case are prime factors in the amount awarded.

The company has forty large manufacturing buildings, of which eighteen are concrete, thirteen are mill construction, five are steel and brick, and four are wood. The work rooms in general are heated and cooled with conditioned air which has been passed through either bag or water spray filters and then over brine or steam coils to distributing fans. Ventilation is forced in most of the work rooms by the plenum system; artificial lighting, where necessary, is made to suit the particular location and the particular work—ruby lights in many cases. The artificial illumination is tungsten lights in holophane reflectors. The wash rooms are supplied with plenum system of ventilation, and abundant hot water is supplied to all employees. Shower baths are located in several parts of the factory buildings. A noonday luncheon is served, at which portions vary from 1 to 5 cents.

There is an elaborate fire department, thoroughly well officered and operated under rigid printed rules, each of the large number of persons employed in the fire brigade being thoroughly drilled in his and her work.

The medical department is in charge of a physician and two nurses. In addition, two other physicians and their assistants give practically their entire time to the examination of applicants for employment. A number of emergency hospitals have been established and fully equipped in different parts of the factory. Rest rooms are connected with all the working units, under competent supervision.

There are not only physical examinations for applicants for employment, but there are seriously conducted periodic examinations of all employees, with a carefully operated "follow-up" system of reexaminations of those who are found to have defects or even the slightest diseases. There is a three-story building covering 43,000 square feet which is used as dining and recreation rooms,

including an assembly hall. There are musical entertainments, smoking concerts, dances and indoor games. A large athletic field of four and a half acres has been laid out with tennis courts, baseball diamonds, football grounds, and cinder track.

All employees of one year's service are paid for time absent on account of sickness or special leave. Employees have from one to two weeks' vacation.

There is a profit-sharing or wage dividend plan, based on the assumption that dividends to common shareholders up to 10 percent are the equivalent of the employee's fixed wage. The plan, therefore, provides that the dividend to wageearners shall be based on like dividends paid to other shareholders. This dividend for the past three years has amounted to 35 percent of the percentage of extra cash dividends paid to holders of common stock. As an illustration of this, the extra dividends to holders of common stock have amounted to 30 percent; 35 percent of 30 percent equals 10½ percent; divided by five equals 2¼ percent on each of five years' wages. Applying this formula, the employee who has worked for the company five years and who has averaged \$15 per week during that time will receive \$81.90, equal to about five and a half weeks' pay. The company does not undertake, in employing its people, to continue the profit-sharing plan, but hopes to do so along somewhat the present lines.

IN A CORPORATION OWNED CITY

* * *

Bush Terminal Company, New York City

The Bush Terminal Company takes issue with the current terms used in welfare work, such as "sociological work," "welfare work," "betterment," "industrial welfare," which the company thinks imply a species of after-hours superintendence and an unwelcome form of charity. At Terminal City, where most of the employees live, a very definite scheme of cooperative health and welfare service is conducted. Many people living in Terminal City do not work for the corporation, but the company takes the ground that it cannot serve even its own employee without also extending a hand to help the next-door neighbor or a boarder living in the house, and therefore its health and recreation activities are extended to all those living in Terminal City.

There is a very efficient and well-organized scheme of helpfulness from the time an employee goes to work with the company until he is laid on the shelf for age or incapacity. "Job insurance," the company thinks, is one of the surest means of rendering the employee comfortable and at peace of mind; and therefore the company undertakes to provide work for all of its people all the time without any extensive lay-offs on account of business depression or lack of work from other causes. Another activity which does much to eliminate worry among Bush workers is a loan bureau, conducted for the purpose of advancing money to employees to meet emergencies, such as sickness, funeral expenses, or the advent of a new member in the family; above all, the purpose of this loan bureau is to defeat the "chattel mortgage" tragedy and the ominous "loan shark." Great care is taken to keep this loan service in good working order and to prevent abuse. The loans are not in the shape of charity, but are made on a businesslike basis, upholding the borrower's self-respect and developing his sense of business responsibility. There is also a savings system, which the employees of Terminal City are encouraged to utilize. It is the company's experience that, having this savings de-

partment connected with the pay-roll desk, employees will often transfer a part of their wages into savings certificates before leaving the Terminal for their homes, thus removing the means and the temptation for spending.

There is a well-devised luncheon system, where the employees can avail themselves of its privileges; "scientific dietary," as such, is kept in the background, but nevertheless the dietary is predicated on sound scientific principles.

There is a hospital and dispensary in Terminal City, and an efficient corps of physicians and nurses. The Bush Company believes that "all work and no play makes Jack a dull boy;" consequently in Terminal City provision is made for bowling, billiards, basketball, and gymnastic sports in the winter, and baseball, tennis, and outdoor recreation in the summer time. The women employees share in the athletic activities as far as they can. There are about 25,000 people provided for in the Bush Terminal Company's welfare work.

SHORT STORY OF BIG WORK

* * *

Standard Sanitary Manufacturing Company, Louisville, Ky.

In the plant the company operates at its own expense a first aid station, in which a trained nurse is kept constantly in attendance, and this same nurse visits the families of employees and renders help in their homes. A unique feature of this company's medical service is that it makes no pretense of furnishing medical attendance to employees free, excepting where the employee has contracted his trouble in the line of duty. In organizing this medical attendance service, it was the design to place it on a self-sustaining basis. Each head of a family pays \$1 per month, which entitles him and his whole family to medical service, while single men pay 50 cents per month. The service does not cover those diseases that require a specialist, but arrangements for such special attention are made by the company at reduced fees. There are approximately 3,000 people who come under the welfare service of the corporation.

PERIODIC EXAMINATION OF EMPLOYEES

* * *

Firestone Tire and Rubber Company, Akron, Ohio

DATA FURNISHED BY MR. R. E. LEE, of the Industrial Service Department.

We have a full-time factory doctor, whose duty it is to examine every applicant for work, and also to periodically reexamine our employees, giving such advice or help as will be of benefit to them. We have been following the policy of fitting the man to the job, and there have been many instances as a result of the examination by our medical department that we have been enabled to be of great help to the employees. We have found employees working at certain operations which required lifting or heavy strains whose hearts were more or less affected. When our attention was called to these conditions, these men were immediately changed to employment where there was no heavy lifting or strains which would likely prove injurious to them. We might add that in no case was the man placed at work which reduced his compensation.

We have in operation a dental clinic, with a full-time dentist, who examines all applicants for work, and treats employees when the teeth require attention, filling the teeth, etc. No charge is made for this work.

We have a hospital in charge of graduate nurses, where all first aid work is administered and subsequent treatment given where necessary.

We have furnished hot meals to our employees at a factory restaurant, which has proved too small, and we now have under construction a four-story club house, which will be equipped with a dining room with a seating capacity of 1,700. This club house will have a modern swimming pool, with shower baths, bowling alleys, pool tables, lounging room, library, and assembly room. The meals which are furnished employees are served at a nominal cost—in fact, at a price less than the cost of operating the dining room, our idea being that the serving of wholesome food in the proper way is mutually beneficial. We carefully observe our drinking water, having in operation artesian wells, and, in order to insure as near as possible pure water, we constructed our own filtration plant, through which the water passes before being piped to the various departments. We do not use any drinking cups, and from time to time have analysis made of the water to determine its condition. We employ a large force of porters to keep the factory in a clean condition. It may be interesting to state that in our force of 4,000 men in 1915 there were only five deaths, three of them having occurred outside of our factory by the men being struck by railroad trains at grade crossings, so that the number of deaths in our factory from natural causes was only two during the year.

The above is a brief outline of our activities in looking after the physical condition of our employees, and we do not feel that they can be considered specially philanthropic. We believe our plan to be a good investment, and, while it might be considered a selfish motive on our part to regard it as a good investment because we think it increases the efficiency of our employees, it is largely a question of economics, and we feel that the money we spend in looking after our employees is not only appreciated by them, but is helping to solve some of our important problems.

Entertainment for Workers

To the Editor of THE MODERN HOSPITAL:

There is a note running through the pages of your splendid August special industrial welfare number that sounds a good deal as though THE MODERN HOSPITAL is not in sympathy with clubs, athletic organizations, military companies, bands, and the like as a part of industrial welfare work. Just what is your judgment as to the desirability of these activities as contributing to the loyalty, the health, and happiness of industrial workers?

A PUBLIC UTILITY CORPORATION.

Without any doubt the conditions obtaining in each corporation or in each manufactory must determine the answer to this inquiry. It seems that the answer must hinge on the location of the plant; the International Harvester company, that does very much for its employees, found that in the Chicago works, where many thousands of men and women are employed, the distractions of the great city, the long distances from the plant that many of the people live, and the many varieties of entertainment that the people find on their own account, make it unnecessary, if not actually undesirable, to inaugurate anything of the kind.

On the contrary, where the plant is a very large factor in the life of a small community, the preponderance of the testimony as expressed in the August number leans in the other direction. In a small town the diversions available to the workers in the one large plant are few and far between. Young people must have diversion and entertainment, and, if they cannot get them, they will go to the big cities, and the plant will lose its most valuable and promising asset. That is the reason why the farms lose their young people.



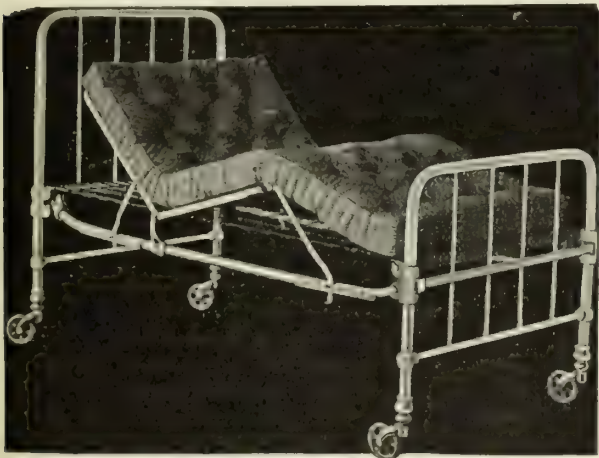
VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor

Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

Improved Fowler Position Attachment for Hospital Beds

The demand by hospitals for Fowler position attachments to beds and springs has led to the development of many different devices for this purpose. One of these devices has found much favor among institutions and hospitals, in which it is already in use, for the reason that it is a simple but strongly constructed attachment, conveniently and easily operated, as may be seen by the illustration. There are no cross bars to interfere with the patient's comfort; the parts that come in contact with the spring surface are flexible copper wire, giving all the necessary strength without sacrificing the essential resiliency. The head and knee rest sections can both be dropped flush with surface of the spring without affecting the patient's comfort in any way.

The illustration represents a regular three-piece Bernstein easily detachable bed, which may be used for all



Bernstein's Fowler position attachment.

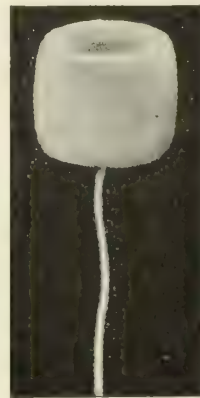
ordinary purposes or the Fowler position by the simple operation of raising the head and knee rest, which is very conveniently accomplished with this particular attachment. This combination feature seems to have everything in its favor, especially as there are no separate springs to lift on or off the bed, and consequently there is no danger of slipping.

The manufacturers state that these attachments are interchangeable in any Bernstein three-piece bed now in use, or the bed may be fitted with this Fowler attachment by the purchase of an entirely new spring with the device, or simply affixing the attachment to the hook springs already in use. The device can, however, also be used

on top of any other springs, not manufactured by the Bernstein company, with satisfactory results.

A Prepared Vaginal Tampon

The cup-shaped tampon illustrated is made of lamb's wool, surrounding an absorbent material. The core of the tampon serves two purposes: first, absorbing any excess of the ointment used and also preventing leakage and staining of the patient's clothing; second, being firm, yet soft, it acts as a pessary. The advantage of the tampon as compared with the usual cotton form is that it does not become soggy and hard. Lamb's wool is the only material which comes in contact with diseased parts. As the cotton in the core shrinks on being moistened in the same proportion as the wool expands, the tampon is retained at practically the same size and does not shrink as would cotton, or expand if lamb's wool alone were used.

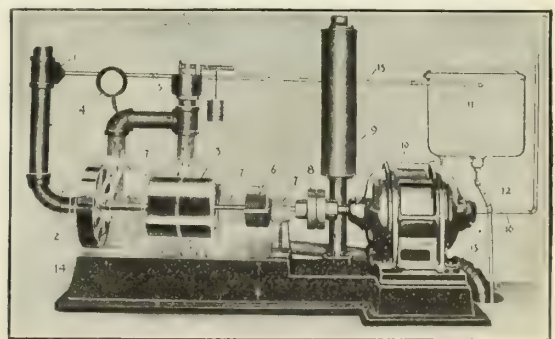


Cup-shaped tampon.

At the present high prices of ichthylol and other preparations of similar nature, this new tampon seems to go far toward the saving of drugs, since use can be made of practically all material applied. The tampons are made in three sizes, and are being sold at a price low enough that it should pay the gynecologist to adapt ready-made tampons on a basis of cost alone, to say nothing of the advantages in the proportioning of the materials used.

New Sanitary Vacuum Cleaner

A sanitary vacuum cleaner, embracing new methods of dirt separation and its automatic continuous disposal, has recently been placed on the market. The most unique feature of the new machine is its centrifugal separator. As the dust-laden air reaches the cleaner, it is washed with water. By the use of a small rotor the dirt and water are separated from the air by centrifugal force and discharged into the sewer under no pressure during the time



Connorsville system sanitary vacuum cleaner.

the machine is in operation. The washed dry air is discharged into a flue. Because of the automatic disposal of the dirt, it is never necessary for the operator to handle sweepings; neither is it necessary to clean out any tanks, as the centrifugal separator avoids those unpleasant and unsanitary features.

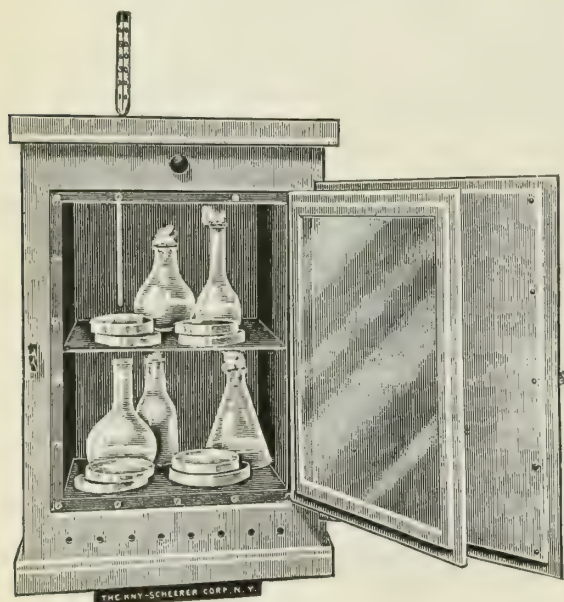
Usually self-discharging vacuum cleaners have a tank, practically filled with water, which empties itself when the vacuum producer stops, and equipped with several

automatic devices and valves which are liable to be stopped with the dirty water. This centrifugal separating vacuum cleaner has only one valve, a simple swing check valve, which opens just wide enough to discharge the water and dirt forced against it by the rotar of the separator. There is a small continuous spray of clean water entering the washing chamber, so that the instant the tool is lifted from the floor, this water cleanses the rotar and pipe line. This spray is drawn into the washing chamber from a box or tank, when the vacuum drops to zero on shutting down the machine. This box is kept full of water by means of a ball float and valve, and this float shuts off the city water supply as soon as the spray pipe ceases to draw from the box. The water and dirt are at all times handled under high velocities, thereby preventing any deposit on the inside of the piping, which would hinder proper operation of the apparatus.

Other important work to which this machine is adapted is the removal of soap suds and dirty water from rugs, carpets, or bare floors which have just been scrubbed, thus making much more rapid and easy the scrubbing of tile and concrete floors. Considering these various features, it seems that these machines are particularly well adapted for hospitals and sanatoriums, as a final disposal of all dirt and germs on entering the cleaning tool is a most desirable feature.

Electric Incubators

A new electric incubator for laboratory purposes, which is simple in construction and easy to manipulate, combined with neatness of appearance, is being offered under the name of the Asta electric incubator. The manufacturers claim for this apparatus that it is carefully tested and set at $37\frac{1}{2}^{\circ}$ C. (99.5° F.) before being sent out, and



Asta electric incubator.

that it will automatically regulate and maintain the heat without variation.

Incandescent lamps have heretofore been employed quite generally to produce the heat required in an electric incubator. In this apparatus a source of radiant heat, as nearly as possible uniformly enveloping the incubating chamber, is employed, and is spaced a uniform distance from the source, so that the transmission of the heat through this distance will make more uniform its distri-

bution about the surface of the shell forming the incubating chamber. The space in which the heating element is located contains a medium readily permitting the passage of radiant heat, and itself having an extremely low specific heat, so that a minimum amount of energy will be absorbed before the incubating chamber itself has reached the desired temperature.

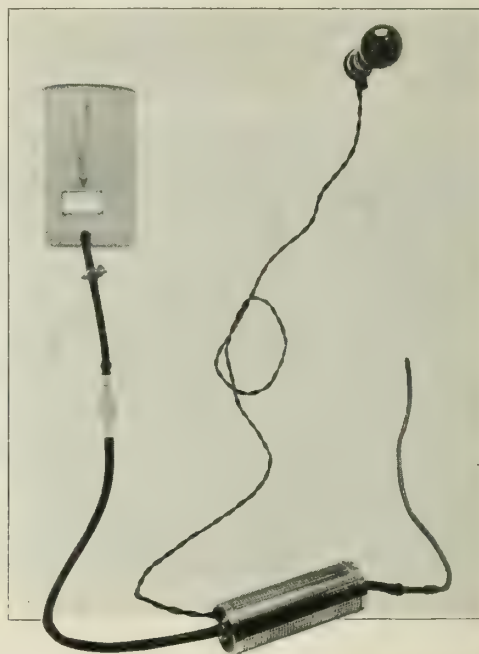
The shell forming the incubating chamber is made of copper, which is an excellent heat conducting material, for the purpose of increasing the uniform distribution of heat, and a heat-trap for the lamp illuminating the incubating chamber is provided. This is embodied in the incubator in such a manner as to conduct the trapped heat to a large area of the shell without affecting an undesired local heating of any particular portion of the inner chamber.

The inside dimensions of this incubator are: height, 16 inches; width, $12\frac{1}{2}$ inches; length, 12 inches; capacity, 2,400 cubic inches.

Nylander Saline Solution Heater

The value of saline injection is so well understood that the merits of this procedure need not here be discussed. There has always, however, been more or less inconvenience in maintaining a practically uniform temperature of the solution. Various devices have been designed, such as electric light bulbs, hot water jackets, and even the alcohol flame has been called into service.

The device illustrated here is extremely simple in design, and, once connected, needs no further attention.



Nylander electrical saline heater.

The apparatus for maintaining the temperature of the solution consists of an electrical heating unit, which may be connected to any convenient socket. The rubber tubing, such as used with the usual saline injection apparatus, is passed through the center of this heating unit. An asbestos apron or covering is furnished, this covering being placed over the heating device and the apparatus attached to the bed clothes with safety pins. As soon as the current is turned on the temperature of the heater will rise to about 130 degrees in twenty minutes, then slowly con-

tinue to increase to 175 degrees, where it will remain as long as the current is on.

Regulation of the temperature can be quite closely maintained, depending on the distance of the heater from the rectum of the patient. For instance, by placing the heater 24 inches from the patient, the temperature of the solution at the point of injection will range from 98 to 100 degrees; if 105 degrees are desired, the heater is placed approximately 18 inches from the point of injection. The pilot lamp, which is placed in series with the heater, indicates whether the heater is taking the current.

The device is of such construction that it will stand considerable handling, and, judging from the number of hospitals which have recently installed it, many of them making use of a number of the heaters, it would seem that the apparatus is one which may be depended on.

Arntzen Auxiliary Stretcher

A stretcher which occupies less space than the conventional folding type, yet which, it is claimed, is stronger, has recently made its appearance. The Arntzen stretcher illustrated here has been designed by one familiar with ambulance and other types of emergency stretchers. It is not claimed that this appliance is to replace the so-called army type of stretcher, where the patient is placed prone on the back, but is rather an auxiliary stretcher, since a great majority of the cases which are



Arntzen auxiliary stretcher.

brought to the hospital can be handled by placing the patient either in a sitting position or on the back, with legs dropped over the end of the stretcher. The appliance is made of seamless steel tubing of such size as to make it convenient and comfortable to the hands of the persons carrying it. A heavy grade of duck canvas is used as covering, and this is stretched tightly over the frame by means of a heavy draw cord. A number of these stretchers have been installed by hospitals for accident cases, handling patients who are sent to the train, etc. On account of the compact size, the stretcher can be placed under the seat of an ordinary touring car.

Hospital and Office Scales

For the modern hospital and the sanatorium a good scale is now considered a diagnostic apparatus and is almost indispensable. The heavy platform type illustrated here (Fig. 1) was especially designed for hospital service. The capacity of this scale is 300 pounds, and the size of the platform is 12 by 15½ inches. The weights given can be depended on, owing to the accuracy and sen-



Fig. 1. De Luxe platform scale.

sitiveness due to its careful construction. No loose weights are used with this scale, and all computing is done on the beams, which are marked on both sides. A nicked brass telescope measuring rod is provided and is attached to the pillar of the scale by brass clamps. The scale is finished entirely in white enamel.

Fig. 2 illustrates a bath room or office scale of an inexpensive and serviceable pattern which has been put on the market under the trade name of improved Madaco. A similar type of scale has been on the market for some

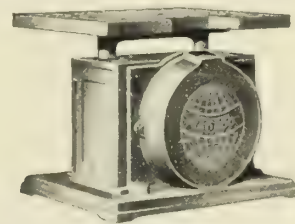


Fig. 2. Improved Madaco physicians' scale.

time, but as this was imported from abroad, it was difficult to replace any part in case this should become necessary, and hence the purchase of this type was not advisable. The mechanical principle is the same as used in the automobile speedometer. Correct weight is instantly ascertained by glancing in the glass aperture set into the top of the outer case, which covers a revolving dial clearly marked with the regular graduations. Other features of the scale are the cork mat fitted into the platform to act as an insulator and the regulating device which enables the user to adjust the dial. This scale is now made in this country, and both the scales here described can be furnished by the surgical supply houses.

QUERIES AND ANSWERS

Cost of a New Hospital

To the Editor of THE MODERN HOSPITAL:

What will it cost us to build and equip a hospital of 50 or 75 beds, with operating room and x-ray apparatus and children's and maternity wards? A TRUSTEE.

You can build a serviceable hospital of 50 beds, with operating room, x-ray apparatus, and children's and maternity wards, for approximately \$50,000, or at the rate of \$1,000 per bed, but we do not think you want to do that. In the first place, you would not get the highest order of construction—strictly fireproof, for instance—but we think the most important reason why a low-priced hospital of that sort would not be to your liking is that in thinking about building a hospital of this size you would want also to think about the possibility of its growing in the future—perhaps even in the near future—so that additions might be needed, and, if your hospital has the sort of backing that we imagine it has, we have no doubt that you would find it necessary quite soon to increase the capacity of your institution, especially if it is a good hospital; and, of course, you want it to be a good hospital, serviceable to its patients and capable of giving modern scientific care to the sick. If this is true, and you do expect that possibly your hospital will grow, then you will have to build with that idea in mind, and the construction under these conditions would be vastly different from other conditions in which the final hospital was to be built at one time; for instance, the administrative space of your eventual hospital ought to be provided for in the first unit—the offices, quarters large enough for an x-ray outfit commensurate with modern medical demands, an area sufficiently large to care for a properly equipped hydrotherapeutic plant, good kitchen and service rooms that will be large enough and comprehensive enough to do you when you get a larger hospital.

We are accustomed to think about the divisions of space in a hospital with about half the room to be actually occupied by patients and about half the space to be occupied for administration—that is, all other space in the hospital. In such a hospital as you ought to build there would be necessarily a large amount more of administrative space than patient space because you are providing for the future in administrative space and you are not providing for the future in the patient space. In other words, you ought to have sufficient administrative space, so that in three years from now, or five, you could build another wing for the actual accommodation of patients, and in which there would be practically no administrative space excepting service, bath, and toilet rooms.

But it is not necessary for you to use all the space that you now build for administration for its ultimate purposes. In other words, you need not put in your hydrotherapeutic equipment at the present moment; you can use that space for a ward for patients. You can build another good ward for patients, with all necessary instal-

lation, to turn it over subsequently for a somewhat elaborate x-ray plant, and for the present your x-ray plant can be rather small and modest in size and purpose, and so with your diet kitchens, your pharmacy, your waiting and reception rooms, your nurses' assembly hall; and in such a hospital as you are thinking about building now we think you could easily provide some space for housing your nurses in an upper floor. It will not require very many nurses, perhaps fifteen, or at most twenty, to take care of a 50-bed hospital.

We think you had better figure about \$2,000 per bed for your hospital, or \$100,000 for a 50-bed institution, and you had better consider, in addition to that, about \$2,500 for an x-ray outfit, although you can get along with \$1,500 for the present. You had better think about \$1,200 for a sterilization plant, about \$400 for the furnishing of an operating room, and twice the amount if you need two rooms, and the children's and maternity wards need not cost more than other parts of the house, excepting that you will have to furnish a delivery room in the maternity department, which will probably cost you, equipped, \$200 or \$300 extra. You can figure that your kitchen is going to cost you about \$1,000 to equip, and then you had better add \$100 for each patient's bed in the house and call that equipment. That will furnish the private rooms with all their belongings, and it will furnish the ward beds and other furniture, and it will furnish also that vast quantity of miscellaneous material needed to nurse patients in the hospital—the enameled ware, the dishes, silverware, napery, linens, rubber goods, basins and bowls, medical and surgical instruments, stretchers and carts, irrigators, and so on ad infinitum.

We are giving you these items more or less separately, not in order that you may add them all up and figure that as the bed-rock price of building and equipping your hospital, but because we have found that, where items of this sort are separated, very often the hospital people can go out and get some donor to give a specific amount for a specific purpose when that same person could not be induced to give a dollar if it was to be merely thrown into the maelstrom of an endowment fund. He is attracted by the idea of a bronze tablet on the x-ray room door, telling of his generosity in presenting that equipment, and he is attracted by the idea of his name being published in the annual reports as one of the substantial donors to the institution.

Your hospital, as a whole, can be built less expensively than the sum of all these items would seem to indicate, and we think, if we had to do the job, we could do it to your and your board's satisfaction with \$100,000 for a 50-bed hospital and with \$5,000 as an equipment fund.

Nurses and Rubber Runners

To the Editor of THE MODERN HOSPITAL:

Please advise us how many patients each nurse should be able to take care of in an ordinary, fairly well-equipped hospital when they have a work room on each floor and other modern conveniences. In your opinion, how many nurses would it require to give the usual service to twenty-eight patients?

Also give your opinion as to the advisability of placing corrugated rubber on the corridors where the floors are of pulp composition. Would this be more practical than battleship linoleum, and, if we put the battleship linoleum down, how could we fasten it to the floor?

A HOSPITAL MANAGER.

1. It would be humanly impossible to say how many nurses it will require to take care of twenty-eight patients unless we knew some of the conditions under which the

patients were to be cared for; for instance, if these are surgical cases, post-operative, they would require a good deal more nursing than if they were medical, and especially chronic medical, cases. It would require also many more nurses to take care of the same number of patients in a scattered-out hospital. For instance, you might have all these twenty-eight patients in one ward, and obviously they could be more easily taken care of and by far fewer nurses than if they were all private room patients, or than if they were in 2-bed wards scattered over three or four floors. If you will give us just exactly the situation in your hospital, we will try to give you a little better, more specific, help.

2. Corrugated rubber makes very excellent runners for halls, and, if you will have it bound at the ends with heavy cloth, the ends will not curl. By pulp composition we presume you mean one of the various magnesia composition floorings, and we are afraid that if you are going to put the runner down on a composition floor already laid with smooth surface, you will have difficulty with the battleship linoleum. You know that comes 6 feet wide, almost wide enough for the full hall, and, if it is of less width than that and you have to cut it, you will find it difficult to fasten it to the composition floor; in fact, to get a good holding surface for battleship linoleum, it ought to be laid on rough cement and sealed with a special cement that comes for the purpose. We doubt whether you would find it very satisfactory to attempt to fasten battleship linoleum to a smooth floor unless you carried it the full width of the floor. If your building is not up yet, we shall be very glad to give you a little sketch for your architect that will permit him to prepare for this battleship linoleum runner that will save you an immense amount of trouble for many years without any further handling.

The Per Capita Cost

To the Editor of THE MODERN HOSPITAL:

I shall be very glad to receive, either by personal letter or through your columns, an answer to the following question, which, as I know, is somewhat a disputed one, and that standard methods perhaps have not yet been established. What is the correct method for determining the cost per capita per day? Should equipment and initial cost of buildings, or any future additions to equipment, additional repairs, or alterations be included in that cost?

If you can give me specific information, as well as the proper method for that determination, I shall be very greatly obliged.

A WESTERN HOSPITAL.

Your problem concerning the per capita cost of patients per day is one of the most insistent and difficult problems before the hospital people of this country at the present time, and no standards have been settled on. There are no means of making comparisons at the present time between any two institutions, and it seems a herculean task to adjust the matter so that comparisons could be made to mean something. For instance, a group of physicians put in their own money to build, equip, and operate a sanatorium, or they organize a stock company and sell stock for the purpose; this initial expenditure must be accounted for, and, as the interest must be paid annually, it must become a part of the operating expenses and must be figured so. Another hospital gets up a subscription list, creates a board of trustees, raises a sufficient fund to build the institution, and establishes an annual subscription list to maintain it. There are no interests to be paid on this fund, and these hospitals do not figure the initial investment as a part of the per capita cost of patients.

And even if every expense, including the interest on the money invested, is figured in, there is another point that remains unsettled—viz., the amount of service given to patients. One hospital has a comprehensive and adequate x-ray outfit, a first-class pharmacist, a good dietitian, a physical therapist, a good pathological department, and all these departments have high-class and high-salaried heads, and they give this service to their patients, while another hospital has none of these scientific departments and is nothing more nor less than a boarding-house for the sick. How can you compare the per capita cost per day of these two institutions? You cannot measure cured patients in terms of money, and you cannot measure service to your sick in terms of dollars and cents.

We think if we were you, we would not try to reduce our per capita cost to the lowest possible point, but would rather increase our service and give more to our patients. We are morally certain that the support of your hospital can be made adequate in proportion to the kind of service you give. If it is a hospital that is conducted for profit, then its fame must extend because of the high order of service, its popularity grow and its income increase. If it is an institution which the public is asked to support by annual contributions, then your subscription list must grow in proportion as your patients go away satisfied and cured, and in proportion as your doctors realize the high order of service you are giving to the sick.

We think one of the most sordid things in the social life of our time is our growing tendency to figure the care and comfort of our sick in terms of dollars and cents; but even if that were a proper method of establishing the value of an institution, and if we were capable of making a sufficiently close analysis to be effective, we would find that, even in terms of dollars and cents, good scientific care of the sick was a paying proposition because well people are assets in a community in proportion as they have an earning power, and sick people are a liability in a community, not only for their keep, but for the absence of earning power, and these things are in a final analysis capable of interpretation into money.

Some years ago the mayor of one of the large cities in the country boasted in an address of welcome before the American Hospital Association that the municipal hospital in his city was caring for its patients for 99 cents per day. Someone, in replying to the mayor's address, said he regarded it as a most shameful admission that the mayor had made, and that, far from being something to be proud of, he should consider it a disgrace that a community as rich as that city should be depriving its sick of adequate care by cutting the cost of operation of its hospital to a point that could not possibly permit decent service. We cite this incident because it is a case in point, and we think it would be a disgraceful thing for any institution, no matter what its form of organization, to give any such service as these low figures must mean, and such institution ought to be closed up by the police power of the community in order to save sick people the extraordinary hazard of submitting themselves and their lives to its care.

As we said, there are no standards of routine practice in regard to figures, and we are trying to get at some figures now. If it can be done, the matter will be reported to the American Hospital Association convention, to be held at Philadelphia.

Miss Marie DeLong, of Roodhouse, Ill., has succeeded Mrs. Mary Chandoine as superintendent of the J. C. Hammond City Hospital at Geneseo, Ill.

HINTS FOR HOSPITAL SUPERINTENDENTS.

The superintendent should carefully scrutinize every requisition for supplies coming from the various department heads. Those on whose shoulders rests no responsibility in connection with the payment of the bills are not infrequently careless and extravagant in making out their requisitions for supplies.

Success in hospital finance demands, as its maximum requirement, that the hospital's expenses shall not exceed the hospital's available income. Because of the failure to meet this requirement, too many of our hospitals are continually in "hot water" financially. They are unable to make needed additions and improvements, they are unable to take advantage of the various markets for supplies at times when purchases may be made at a distinct saving, they are unable to take advantage of cash discounts on purchases—which means a considerable item during a year—and too frequently they are in bad odor with those from whom they purchase their supplies because of their slow and unsatisfactory methods of paying for their purchases. No hospital having a record for the slow payment of its bills can hope to buy to the best advantage. The incurring of obligations without a certainty of being able to meet them when they become due does not represent either successful finance or common honesty. Hospital efficiency must depend on the possession of the funds necessary to meet the increasing calls that beset on every side the ablest and most conservative management, caused by the constant changes and advances in hospital standards, in order that the hospital may in every department be kept abreast with the latest professional and other knowledge. It is a wearing struggle to strive to maintain high standards of efficiency without the necessary means of support. Whichever way we turn, we find successful finance appearing as an essential requisite in the attainment of the highest order of hospital efficiency.

Organize your purchasing department on a scientific basis, and run it on the same general lines as a like department would be run in an up-to-date metropolitan hotel, a self-supporting club, or a first-class restaurant. Don't buy at random; know your wants and purchase accordingly. Overestimating means unnecessary loss of interest on money invested, additional risk of depreciation, and storage expense. Underestimating means, in the purchase of supplies, additional orders, with loss of the advantage in price as well as extra haulage expense; merchants are always reluctant to do something for nothing.

Delegate your authority, and see that proper reports of previous consumption are kept in an up-to-date manner, and then reduce the business to a per-capita basis. Information of this kind, when kept by an adequate system, is always at your finger ends and places you "one think" ahead of your purchasing board; you will use it for comparative estimating, and from it you will formulate your standards.

If the size of your institution warrants a purchasing agent, see that he is alert, listens to complaints, and has sufficient brains to conduct a like business on a paying basis. The ideal agent is the man who has the happy faculty of being able to accommodate his special senses to agree with those to whom he must cater.

One of the most annoying elements with which many hospital superintendents have to contend is the incompe-

tent board or committee member. Too little care is exercised by most hospitals in selecting these officials, and, as a result, the average member of the board of trustees and of the various committees possesses but little, if any, practical knowledge regarding the needs of a hospital or of approved practical methods of hospital management. It is too frequently the case that women of more or less social prominence are elected to these positions, on the supposition that they will give the hospital an advanced standing in the community, and that they will be able to bring additional financial support to the hospital. It is a pretty well established fact that in most instances women of this character are inclined to be dictatorial in their methods, and this, added to their almost absolute lack of practical knowledge regarding hospital administration, makes the position of the superintendent at times most trying and disagreeable. Occasionally the superintendent, if a person of strength of character and tact, can master the situation, but too often the lines of least resistance are followed—and the hospital suffers in consequence. Taking into consideration the composition of the average hospital board, the problem of how to effectually remedy this defect is not easy to solve; it will probably remain a matter with which each individual superintendent will have to wrestle—the strong superintendent will win out, at least partially, and the weak superintendent will, after a period of discouragement, fall by the wayside. It might not be a bad idea were hospital superintendents to apply to this problem something of political tactics by endeavoring to bring about the election of board members more nearly naturally fitted for the needs.

Recently the question of marking washable fabrics came up in a certain hospital, and the reasons for marking fabrics and the question of markings to be done were discussed. The old way of marking fabrics—that is, by the use of a piece of tape marked with indelible ink and then sewed to the fabric—came in for round denunciation, not only because of the great amount of work entailed in connection with this sort of marking, but on account of the unsatisfactory nature of the marking itself. An immense amount of care has to be used to write on a piece of cotton fabric so that it will be legible and remain so. An ordinary sewing woman or one of the downstairs employees cannot do this work. It requires one with some education and artistic culture and taste, as well as one who is painstaking and careful, and such a person is not paid to do work of that sort.

Then the question of what should be included in the marking was discussed, and it was pretty definitely agreed that the name of the hospital, the place in the institution where the piece was to be used, and the exact date that it went into service, should all be on the marking. Every time a hospital buyer goes out to buy sheets or spreads or blankets, or linen or cotton goods, she will be offered fabrics that she has never used before; sometimes these fabrics will look so good and will be so highly recommended, and will carry so evidently the hallmark of quality, that they are purchased even at an increased price over what other and better known fabrics could be bought for; then later on these fabrics, like many people in this world, prove not to wear well. How are we going to know just what goods it is that are wearing out unless we have a mark on them that will tell us immediately, so that we can go to our buying files, ascertain the brand, the house from which purchased, the price and the date at which the goods went into service? "All that glitters is not gold."

TO PREVENT AND CURE HEART DISEASE

New Association Inspired by the Burke Foundation in New York—Some of the People and the Work It Proposes to Do

The Association for the Prevention and Relief of Heart Disease, organized and incorporated in the year 1916, gives needed recognition in concrete form of the magnitude of the heart disease problem, the increasing medical, economic, and social bearings of which are becoming known as of first importance. According to public health statistics, more people in New York city die of heart dis-



Fig. 1. A golf tournament, at which prizes are given. This is an excellent game for convalescents.

ease than of tuberculosis, and the death rate from heart disease is increasing steadily from year to year. The management consists of the following persons:

Board of Governors.—Mr. Bailey B. Burritt, Dr. Hubert V. Guile, Dr. S. Josephine Baker, Miss Mary E. Wadley, Mr. Ray Morris, Dr. Nathan Brill, Dr. Frederic Brush, Mrs. Linzee Blagden, Dr. Lewis A. Connor, Mr. W. Frank Persons, Dr. Haven Emerson, Mr. Morris Waldman, Dr. N. Gilbert Seymour, Dr. Alexander Lambert, Mr. Chas. Burlingham, Jr., Miss Ruth Morgan, Dr. Nelson L. Deming, Dr. Warren Coleman, Dr. Walter B. James, Mr. Thomas W. Lamont, Dr. Robert Halsey, Dr. John W. Brannan, Dr. Lee K. Frankel, Dr. T. Stuart Hart, Mr. William H. Wheelock.

Officers and Committees.—President, Dr. Lewis A. Connor; vice-president, Dr. T. Stuart Hart; secretary, Dr. Nelson L. Deming; treasurer, Mr. Ray Morris. **Executive Committee.**—Dr. Robert H. Halsey, chairman; Dr. Haven Emerson, Dr. Hubert V. Guile, Mrs. Linzee Blagden, Dr. Frederic Brush. **Committee on Relief.**—Dr. Frederic Brush, chairman; Dr. Hubert V. Guile, Mr. Morris Waldman, Mr. Chas. Burlingham, Jr. **Committee on Prevention.**—Dr. Robert E. Halsey, chairman; Dr. Walter B. James, Dr. Theodore Baringer, Jr., Dr. Alexander Lambert, Dr. Warren Coleman. **Committee on Publicity.**—Mrs. L. Blagden, chairman; Dr. Haven Emerson, Dr. Frederic Brush.

The purposes of the association are briefly outlined in the following program:

Gather data from wide sources, and arrange for its practical application in education, occupation, and social welfare.

The central office to serve as a clearing-house and information bureau.

Study and develop occupations and vocational guidance for cardiacs (main problem in relief) in standard trades and situations, as well as in special lines as already begun. Take formative interest in workman's compensation, insurance, and like problems peculiarly affecting cardiacs.

Assist in the establishment of more cardiac classes (which have proved high efficiency in their modest beginnings) in appropriate districts, and extend and correlate their efforts.

Constantly work for the prevention of heart disease through the dissemination of information and the application of recognized preventive means (as in the increased facilities for post-rheumatic, throat, dental treatment, etc.).

Organize cardiac convalescence to provide larger opportunities in existing institutions (especially for youth) through better selection of patients, standardized long-term care, with occupation, etc.

Assist in coordinating the various efforts in this field as made by health department, school, cardiac classes, special investigators, the "Trade School for Cardiacs," etc.

Encourage the setting up of branch or similar associations.

Funds necessary to carry on the central office work are fairly provided for the first year by the Burke Relief Foundation, but additional support is needed for important extensions of effort. Memberships are established with the following dues: active membership, \$3; sustaining membership, \$10; a supporting membership is also available. Checks or money orders should be made payable to Mr. Ray Morris, and should be sent to the executive secretary.

Central office, 340 East Twenty-sixth street (near First avenue). Hours, 9 to 11 a. m.

MISS M. L. WUGHTER,
Executive Secretary.



Fig. 2. Patients at one-hour shifts, the aim being not merely to fatten, but to toughen for life.

REPORT OF THE COMMITTEE ON RELIEF OF THE ASSOCIATION FOR THE PREVENTION AND RELIEF OF HEART DISEASE

The following lines of effort are chosen, from the very wide field, for immediate applications of relief in heart disease:

FIRST—OCCUPATION FOR CARDIACS, THE MAIN PROBLEM IN RELIEF.—(a) School children; vocational guidance, early selection of suitable occupations, through cooperation of school nurses and others with the special cardiac clinics and the office of this association.

(b) Adults under supervision of social service mainly. (1) Adapting present occupation to the physical requirements of the patient; (2) changing occupation; (3) teaching a new occupation—success in this depends on proper selection of cases, freedom from anxiety, hygienic surroundings, rest when needed, and the chance of a work in which manual and mental dexterity are substituted for physical exertion, as exemplified in the Trade School for Cardiac Convalescents; (4) establishing of the handicapped in a small self-supporting business.

SECOND—CARDIAC CLASSES.—To be established, in connection with hospitals when possible, in appropriate districts. Patients to be referred from hospital wards, dispensaries, schools, department stores, and other commercial enterprises having medical examination, the National Guard, the various city departments, insurance companies, etc.

Duties of the Cardiac Clinic, divided into medical and social.

Medical service to cover: (1) Constant supervision of the patients, with attention to rheumatism, teeth, tonsils, sinuses, infective foci anywhere, chorea, syphilis, alcoholism, nerve and mental strain; (2) diagnosis of heart disease; (3) estimation of cardiac efficiency; (4) examination of applicants for convalescent homes; (5) assistance in the selection of suitable occupations.

Cardiac Social Service includes: (1) Referring patients to the clinics; (2) follow of hospital, dispensary, and convalescent cases; (3) study of occupations and placing therein; (4) home convalescence and betterment of home and hygienic conditions; (5) temporary financial aid.

THIRD—MORE OPPORTUNITY FOR CARDIACS IN CONVALESCENT INSTITUTIONS.—Through careful selection of patients (mainly by cardiac classes), thus obtaining (1) much needed short periods of rest and fre-

as the syphilitic group of adult life; (2) intoxications; (3) improper modes of life and work.

SECOND.—To publish the established facts concerning the causes of heart disease for the information of (a) physicians through (1) weekly bulletin New York health department, (2) medical press, (3) meetings; (b) the laity through (1) schools, (2) lay press, (3) meetings.

THIRD.—To devise methods of prevention founded on the demonstrated causes. (a) Establish cardiac classes. (b) Cooperation for (1) better hospital management of cardiacs; (2) better dispensary service for cardiacs; (3) betterment of various unfavorable conditions; (4) more and better dental clinics; (5) better operative work in throat clinics. (c) Social worker to (1) visit homes; (2) advise concerning children and adults; (3) find suitable occupation; (4) arrange proper convalescence.

FOLLOWING UP INFANTILE PARALYSIS

New York Organizes to Give After-Care Following the Present Epidemic

The most serious aspect of the poliomyelitis epidemic which visited the city of New York with a marked impression about the latter part of May, and whose persistency has netted to date some 8,500 cases, has been met by the health officials and the leading members of the profession of New York with a degree of foresight and precision that must inure to their credit.

As soon as the scourge began to assume proportions, it was apparent that plans for the treatment of the victims during their acute stage was not the only matter to be thought of. Those gentlemen who are held responsible, to a very large degree, for the well-being of the citizens of their community readily realized that, when the acute stage passed, it would be of the utmost importance to see that all patients receive such after-care as would prevent, as far as possible, crippling deformities.

Dr. Haven Emerson, commissioner of health of the city of New York, impressed with the necessity of systematically arranging for the after-care of infantile paralysis victims, summoned to his office on August 7 a group of recognized orthopedic surgeons, representatives of orthopedic dispensaries and hospitals, superintendents of social service agencies, and heads of charitable institutions in the city for conference. This body of

men and women, assembled at that meeting, had presented to them the single proposition, Shall the thousands of youngsters, ranging in ages from 3 months to 10 years, who are now being rapidly discharged from the quarantine hospitals, remain permanent paralytics and be allowed to grow into useless manhood and womanhood?

Without much ado an organization was effected, to be known as the New York Committee for the After-care of Infantile Paralysis Cases, and Dr. Thomas J. Riley, of Brooklyn, was chosen chairman. Plans were perfected, outlining the scope of the work. Dr. Donald E. Baxter, eastern representative of THE MODERN HOSPITAL, was appointed director and will assume general charge of all after-care work. A suite of offices were selected at 289 Fourth avenue, Manhattan, New York city, and furniture and incidental equipment installed. In accordance with the plans, a registry was established, containing a record



Fig. 3. Boys from the boys' branch taking down an old house, and to rebuild with the material.

quent prevention of decompensation; (2) long-term convalescence, for those recovering from severe breaks, where the method of living must be radically changed, even to the teaching of new occupations in selected cases.

FOURTH—PERMANENT INSTITUTIONAL CARE.—Large numbers of cardiacs, known as third-stage cases, have repeated breaks in compensation and possess little or no economic value to the community. About 50 percent of their time is spent in hospitals, and the remainder in losing the slight gains thus made. They are too chronic for the hospital, too serious for ambulatory treatment in cardiac class or dispensary, too uncertain for the convalescent home. They are fit only for permanent institutional care. Some economic values are often latent in these persons if suitable occupations are provided within the institution, with sales outlet for the product arranged. Such institution could never be more than partially self-supporting.

The Committee on Prevention has planned its work under three main heads:

FIRST.—To investigate and collect the available data of the cause of heart disease, whether arising from (a) congenital defects, or (b) subsequently acquired from (1) infections in childhood, as the rheumatics, emphasizing particularly the importance of this class, as well

of all cases of infantile paralysis in the city, and suitable methods were devised to keep a record of the after-care.

A bureau of advice and information was also created, which will gratuitously advise as to agencies and methods of after-care treatment.

The city has been apportioned tentatively into appropriate districts, and the cases are being grouped into the districts so as to secure the best treatment and care without the overlapping of agencies or the neglect of any case.

The following institutions, as enumerated by the New York City Board of Health, are recommended to patients needing after-care:

MANHATTAN.—Hospital for Deformities, 1917 Madison avenue; days, daily except Sunday; hours, 1-5 p. m. Hospital for Ruptured and Crippled, 327 East Forty-second street; days, daily except Sunday; hours, 1-3 p. m. New York Orthopedic Hospital, 420 East Fifty-ninth street; days, daily except Sunday; hours, 1:30 to 3:30 p. m. Herman Poliklinik, 137 Second avenue; days, Monday, Wednesday, and Friday; hours, 1-3 p. m. German Hospital, Seventy-seventh street and Lexington avenue; days, daily except Sundays and holidays; hours 9-10 a. m. St. Luke's Hospital, One Hundred and Fourteenth street and Amsterdam avenue; days, Tuesday and Friday; hours, 1:30 to 2:30 p. m. Roosevelt Hospital, Fifty-ninth street and Tenth avenue; days, Monday, Wednesday, and Friday; hours, 9:30-11 a. m. Bellevue Hospital, Twenty-sixth street and First avenue; days, Monday, Wednesday, and Friday; hours, 10-12 a. m. New York Post-Graduate Hospital, Twentieth street and Second avenue; days, daily except Sunday; hours, 4:30-6 p. m. DeMilt Dispensary, Twenty-third street and Second avenue; days, daily except Sunday; hours, 2-3 p. m. Mt. Sinai Hospital, One Hundredth street and Fifth avenue; days, daily except Sunday; hours, 1-4 p. m.

BRONX.—Fordham Hospital, Crotona avenue and South boulevard; days, Tuesday, Thursday, and Friday; hours, 10-12 a. m. Lebanon Hospital, Westchester and Cauldwell avenues; days, daily except Sunday; hours, 3-4 p. m.

BROOKLYN.—Memorial Dispensary, 827 Sterling Place; days, Monday and Thursday; hours, 2-4 p. m. Polhemus Memorial Clinic, Henry and Amity streets; days, daily except Sunday; hours, 10-11 a. m. Brooklyn Hospital Dispensary, Raymond street and DeKalb avenue; days, first and third Monday, second and fourth Thursday; hours, 1-2 p. m. Jewish Hospital of Brooklyn, Classon avenue and St. Marks avenue; days, Monday and Thursday; hours, 10 a. m.-3 p. m.

QUEENS.—Flushing Hospital Dispensary, Carsons and Forest avenues; days, daily except Sunday; hours, 3-4 p. m.

BRONX.—Bronx Hospital and Dispensary, 1385 Fulton avenue; daily, 9-12 a. m.

BROOKLYN.—St. Mary's Hospital, Buffalo and St. Marks avenues; days, Monday, Wednesday, and Friday; hours, 2 p. m.

Each day the department of health of the city informs the committee of the cases that have been discharged from quarantine hospitals, or those that have had the quarantine lifted from their homes. Immediately the social service agencies are notified and nurses are sent forth to visit the patients. All cases of residents of the borough of Brooklyn, where the scourge hit heaviest, are referred to the District Nursing Committee, 80 Schermerhorn street, Brooklyn—Miss Elizabeth Stringer, superintendent. Cases in Manhattan below Twenty-third street and to the Battery are referred to the Association for the Care of Crippled Children, 105 East Twenty-second street, New York, and cases in the remaining part of Manhattan and in the three other boroughs—Bronx, Queens, and Richmond—are referred to the Henry street settlement, 265 Henry street, New York, of which institution Miss Bessie G. Amermann is superintendent of the nurses.

The nurses make a sufficient number of visits to enable them to provide for a permanent plan of treatment, and they then report to the committee on after-care, which in turn refers the patient to the orthopedic dispensary or hospital most conveniently located. It might also be mentioned that when it is planned to discharge a given case from a quarantine hospital, the authorities advise the parents of the child as to the necessity of properly caring for the child for at least one year. They are instructed to consult their family physician if he is skilled in the care

of deformities, or visit the nearest of the orthopedic dispensaries in the city. A list of the orthopedic hospitals and dispensaries, together with consultation hours, is also presented to the parent.

The committee will establish in the very near future special clinics for the attendance of orthopedic surgeons and for the instruction of nurses and masseurs and other attendants in methods of after-care. The magnitude of the plans adopted by the committee is best illustrated by a statistical statement prepared by Dr. Thomas J. Riley, general secretary of the Department of Public Charities of Brooklyn and chairman of the New York committee on after-care of infantile paralysis cases. In his statement the number of survivors from the disease was estimated at 6,100 to September 1, and the total number of discharges up to November 1 at 4,333. It was figured out that the number of discharges would be 82 per week day; the estimated discharges from their homes from August 15 to November 1 would be 1,742 or thirty per week day. Of the cases needing after-care it was calculated that they would approximate two-thirds of the hospital discharges, or about 3,000; that one-fifth of the 3,000 should have convalescent hospital care, or 600, and four-fifths, or 2,400, should have dispensary care.

The convalescent beds needed by November 1 will be 600, and the cost to January 1, at \$1.25 a bed, will be \$67,500. The dispensary service at 60 cents per treatment, twenty-five treatments a month, to January 1, will cost about \$108,000. The estimated cost of social service by nurses is \$8,940; transportation of the crippled to January 1, \$8,000, and the total cost to January 1, 1917, about \$192,000.

DISPENSARY ROUNDERS—REAL AND IMAGINARY

A Study of Duplication of Patients Among Dispensaries in the Same City

BY MICHAEL M. DAVIS, Jr., Director of the Boston Dispensary, and DR. JOSEPH B. HOWLAND, Assistant Resident Physician of the Massachusetts General Hospital.

Among discussions of various topics in dispensary work, the so-called "rounder" has figured not a little. Stories are told at meetings of "Mrs. Jones," who liked to spend her time in clinics, and was found to be a patient at four different dispensaries at the same time. There are patients in private practice who get the "doctor habit" and run from one office to another. In private practice they must pay for their fun, so there is a natural motive to keep the habit down. In dispensary practice the patients spend time rather than money, and we may naturally expect that, human nature being much the same in all classes, there will be some individuals who will run the round of many clinics.

But what proportion of patients do this? How serious is the evil? We must not be misled by a few individual cases. The usual discussion of the subject does not deal with the *proportion*, which the case of Mrs. Jones and others like her bears to the total number of cases at the dispensaries.

An attempt has been made by the writers to set this question in its proper proportion. The large out-patient clinics of the Massachusetts General Hospital and the Boston Dispensary are only about a mile apart. A study was made last year according to the following method: 500 consecutive admissions of new patients at each institution were listed, the name, address, and other identifying information concerning each patient being copied from one of the regular records of the admitting officer onto sheets

or slips. These were then furnished to the other institution, and, after a period of between two and three months had elapsed, the record room force at the Boston Dispensary looked up the patients listed by the Massachusetts General and the record room force of the Massachusetts General out-patient department looked up the five hundred cases which had been admitted to the Boston Dispensary. Thus each institution found out how many of the five hundred patients which had come to the one had also been admitted as patients of the other.

The results are as follows: Of the 1,000 patients, 41 were found to have attended both institutions. This is $4\frac{1}{10}$ percent. Of the 41, however, only 12 went within a short period, so that they were receiving approximately simultaneous treatment. This is only $1\frac{1}{10}$ percent. The remainder, or 29, had not gone to the second institution until over six months had elapsed since their visit to the first one. In detail: 8 visited the second clinic between six months and a year after the first, 5 between one and two years, and those remaining, or 16, over two years.

It is readily seen that the proportion of cases at these two institutions that were receiving simultaneous treatment is negligible. Twelve in 1,000 is not enough to bother about, despite the rare appearance of an individual who is to be condemned for the so-called "rounding" habit.

Obviously the amount of duplication of work among dispensaries will depend considerably on the care with which patients are admitted. Both of the institutions concerned in this study have rules forbidding the acceptance of patients who are under treatment at another recognized dispensary (unless there is an officially acceptable ground for transfer). Both dispensaries also have organized admitting departments to see that this rule, which is clearly in the interest of the patients as well as the clinics, is actually carried out. The information gathered in this study certainly indicates that it is.

These two institutions are not exceptional, at least in Boston. One of the writers carried out a similar study in 1913. Through the cooperation of the administrative heads of the Massachusetts General Hospital, the Boston Children's Hospital, the Infants' Hospital, and the Boston Dispensary, 500 consecutive cases of children admitted to the out-patient departments of the first three of these institutions during the first few months in 1911 were compared with each other. In no case was there more than 2 percent of overlapping, and this was in the case of two of the institutions which at that time had their out-patient clinics very near to each other—within a stone's throw, in fact. The amount of overlapping between the other two institutions was not over 1 percent.

The entire group of 1,500 cases of these children at the three institutions named was then compared with the whole number of children who had been treated from 1911 to 1913 in the Boston Dispensary clinics (over 25,000 in number). The duplication here, in spite of the fact that three years had elapsed during which visits might have been paid at the Boston Dispensary by these children who had come to the other institutions three years before, was only 5 percent. The amount of simultaneous treatment could not have been more than a fraction of 1 percent.

Mention may be made of one further study. The Mt. Sinai Hospital, of Boston, has until recently conducted a dispensary clinic at a location quite near the Massachusetts General and within walking distance also of the Boston Dispensary. This clinic was comparatively small—only an average of about 50 visits daily. One would naturally expect that, with a clinic dealing largely with a local problem, there would be a considerable proportion of

cases who would go to larger institutions for special diagnostic service and for other reasons. The management of the Mt. Sinai Hospital had a study made, following the same methods pursued by the writers of this article. Five hundred cases were taken from the records of the Mt. Sinai Hospital in consecutive order, these cases covering a period of about six weeks beginning in December, 1914.¹

These 500 cases were then looked up in the records of the Massachusetts General Hospital and the Boston Dispensary. Of them, 62 cases, or 12 percent, received treatment at the Massachusetts General Hospital, and 20 cases, or 4 percent, received treatment at the Boston Dispensary, a total of 82 cases, or 16 percent. But only 29, or a little less than 6 percent, were receiving treatment at about the same time. Thus, even in a local clinic, from which the number of cases referred to or going voluntarily to the larger out-patient departments may properly be considerable, the percentage of such cases is actually quite small.

It is highly to be desired that before the discussion or criticism of dispensary "rounders" assumes any large proportion in any community where there is much dispensary work, some of the local institutions should institute studies of this kind, so as to provide the discussion with some definite basis of fact.

A 24-room emergency hospital, said to be the only institution of the kind solely owned and operated by an industrial insurance company, has lately been opened at 484 East Jefferson avenue, Detroit, Mich., by the Michigan Workmen's Compensation Mutual Insurance Company. The equipment, which is said to comprise every modern facility for efficient emergency service, includes a portable x-ray outfit, which makes it possible to make plates for diagnosis without removing the patient from his bed. Another item is a giant eye magnet for the extraction of particles of metal deeply imbedded in the eyeball. Dr. D. L. Stilwell is superintendent of the hospital, and Dr. H. N. Torrey, surgical director. An out-patient department will be maintained.

The View Point Tuberculosis Sanatorium at Elm Grove, near Wheeling, W. Va., which has been closed for some time, will be reopened in the near future. The commissioners of Ohio county are to cooperate with the Ohio County Anti-Tuberculosis League in the support of the institution, having already appropriated \$8,000 to pay for the care of the county patients.

In the Hospital

The doctor smiled, and said, "You may go home Tomorrow," and he looked surprised when I Returned no answering smile. How should he know The sudden shrinking of my tortured flesh From all that "going home" implies to me? I am so tired—so tired! And when I think Of taking up the burdens that I dropped When sickness bought for me a breathing space— The grimy, odorous clothes, so hard to rub To whiteness as I bend above the suds; The food that must be bought, prepared, and cooked; The constant struggle to keep up the rent, So that our poor, cheap sticks of furniture May not be set out on the public street. (Ah, God! that fear looms chief of all my fears!)— Then is it strange that I should weakly cling To this white cot, this atmosphere of rest, Where I may sleep, afar from vendors' cries, And noisy brawlings from the flat next door? I almost hoped this pain would end all pain, And I should die, here in the hospital; But no; the verdict's "Life!" I must "go home!"

FLORENCE VAN CLEVE.

—[New York Times.

¹These data have been kindly furnished us by the courtesy of the trustees of the Mt. Sinai Hospital through Miss Gertrude T. Spitz, the investigator.

THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. VII

November, 1916

No. 5

BROOKLYN'S OLDEST HOSPITAL BUILT ANEW

Group of Buildings Designed According to Latest Accepted Rules of Architecture Is One of the Show Places in the City—Some of the Details

BY DR. W. J. NEALLEY, SUPERINTENDENT, AND MR. J. MONROE HEWLETT, ARCHITECT

BROOKLYN'S oldest hospital has, during the past two and one-half years, been completely rebuilt on the original site, an elevation overlooking the city and harbor of New York, close to the business center of Brooklyn, and adjoining and forming practically a part of Fort Greene Park.

There are 289 beds, apportioned as follows: private rooms, 38; private (4-bed) wards, 54 beds; public wards, 191 beds; isolation, 6 beds.

ADMINISTRATION BUILDING

Basement—X-ray department.

Ground floor—Main office.

Second floor—Maternity wards, extending back into the north pavilion, where the delivery rooms are located.

Third floor—Private obstetrical rooms and wards.

Fourth floor—Quarters for female officers (heads of departments).

NORTH PAVILION

Basement—Drug room, storage rooms, and lecture room.

First floor—Trustees' room, offices for superintendent and directress of nurses, visiting staff room, history record room, and stenographers' office.

Second floor—Maternity delivery rooms (with soundproof partitions) and duty rooms.

Third floor—Operating suite.

Fourth and fifth floors—Interns' quarters.

EAST PAVILION

First floor—Private wards for women.

Second, third, and fourth floors—Private rooms, each connecting with a balcony.

Roof—Large solarium.

WEST PAVILION

Ground floor—Ambulance and service entrances. South wing, emergency wards and treatment rooms; north wing, main kitchen, diet kitchen, and help's dining rooms.

First floor—Dining rooms for doctors, nurses, and clerks, served from a central serving room (above the kitchen); south wing, private wards for men.

Second floor—Surgical and medical wards for women.

Third floor—Surgical and medical wards for men.

Fourth floor—Children's wards.

NURSES' HOME

Basement—Diet class room, lecture room, small laundry for individual use, and trunk room.

First floor—Library and reception rooms, quarters for officers of the training school.

Second, third, and fourth floors—Pupil nurses' rooms, each nurse having a single room.

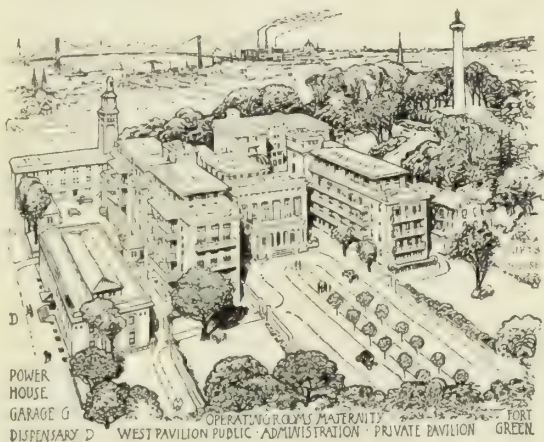


Fig. 1. Brooklyn Hospital. Bird's-eye view of the buildings.

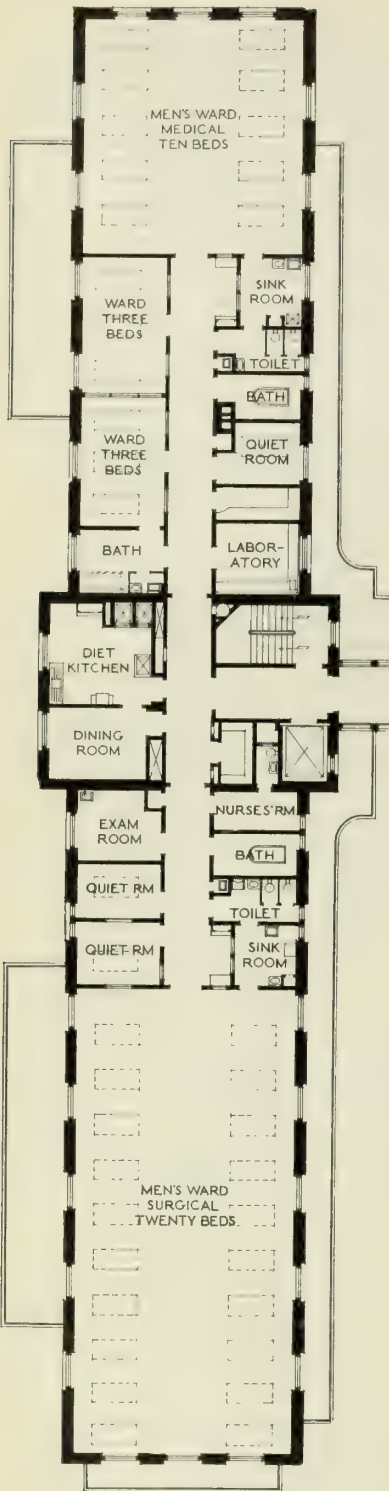


Fig. 2. Brooklyn Hospital. Typical floor plan, public ward building.

Each bed has a silent call system connection to summons the nurses, and the megaphone system is used for calling the doctors.

The floor lights in the wards, installed with some degree of hesitancy, have proved most satisfactory. They are built in the floor construction to a depth of about 10 inches, and are 11 inches in diameter, 8 inches of which is glass. The top can be removed for cleaning or renewal

The nurses' home is connected with the nurses' dining room, which is located in the west pavilion, by means of a private corridor shown on the ground plan.

POWER BUILDING

Basement—Boiler and engine rooms, refrigerating plant, ice plant, vacuum cleaning machine, water filters, and generators.

First floor—Laundry and linen rooms.

Second floor—Quarters for male help.

Third floor—Quarters for female help, each one of the help having a separate room.

The pathological department adjoins the west pavilion, and occupies two floors, each 35 by 30 feet.

A garage adjoining the power building accommodates at present two gasoline ambulances and one horse ambulance.

The buildings are heated by forced hot water circulation, except the operating and delivery suites, which are heated by steam.

The floors in the wards and private rooms are of terrazzo, so paneled that the joints come over beams so as to eliminate cracks as far as possible. Countersunk linoleum is used in the centers of the large wards. The dormitory floors of the nurses' home, also help's quarters, laundry, and service department of the hospital are of cement. Red tile 6 inches square is used in the main kitchen and diet kitchen. The floors and walls of the operating rooms are of gray tile.

All wards and private room floors have blanket warmers, the duty rooms have ventilated closets for utensils, and the examining room sinks have elbow control for the faucets.

of bulb. The sides are painted white and a 10-candle-power bulb gives sufficient light for the nurses to move about the ward and not enough light to disturb the patients.

There is sufficient balcony and solarium space to allow every patient to be moved out of doors. There are spacious lawns for convalescents, and also a tennis court for those who desire to participate in that pastime.

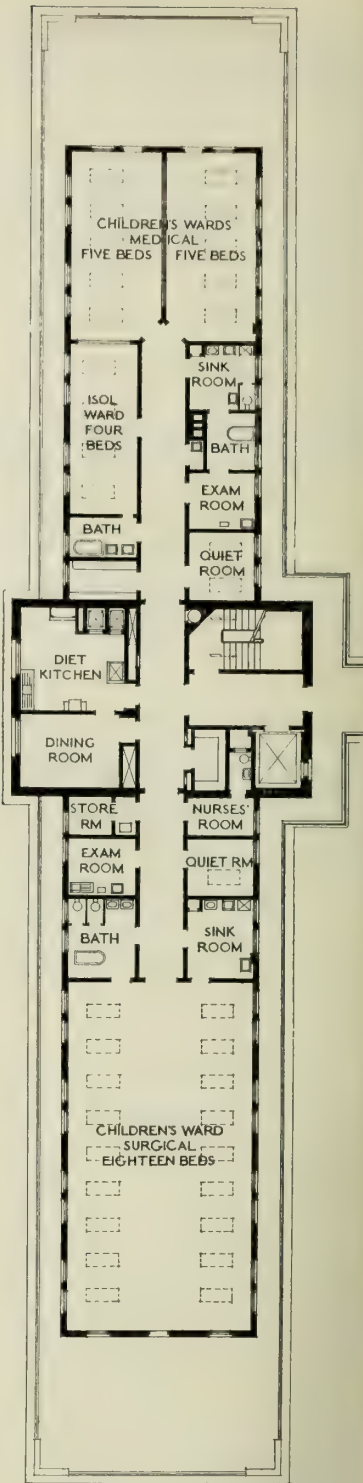


Fig. 3. Brooklyn Hospital. Children's ward, showing roof promenade.

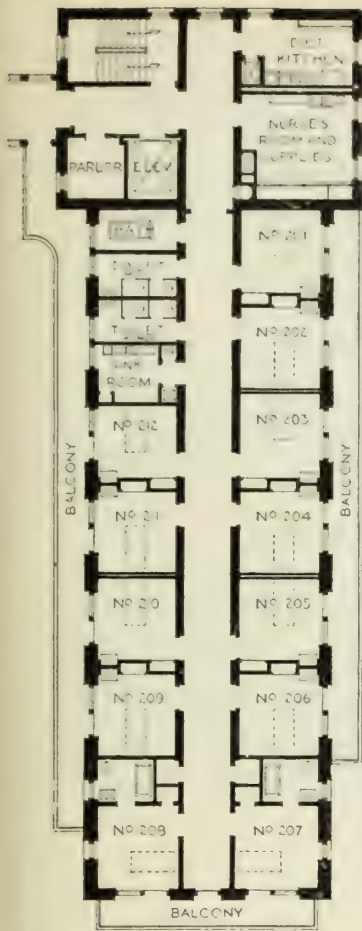


Fig. 4. Brooklyn Hospital. Typical plan of private room floor.

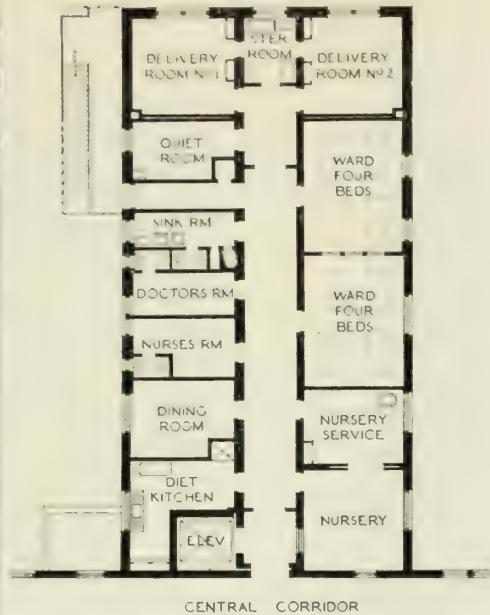


Fig. 5. Brooklyn Hospital. Delivery room and maternity ward floor.



Fig. 6. Brooklyn Hospital. Operating suite and private maternity floor.

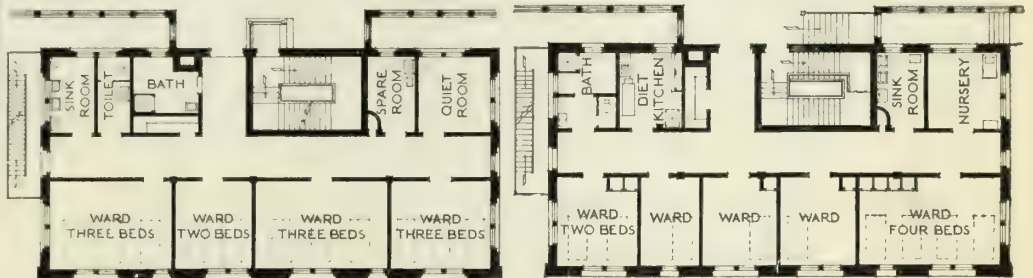
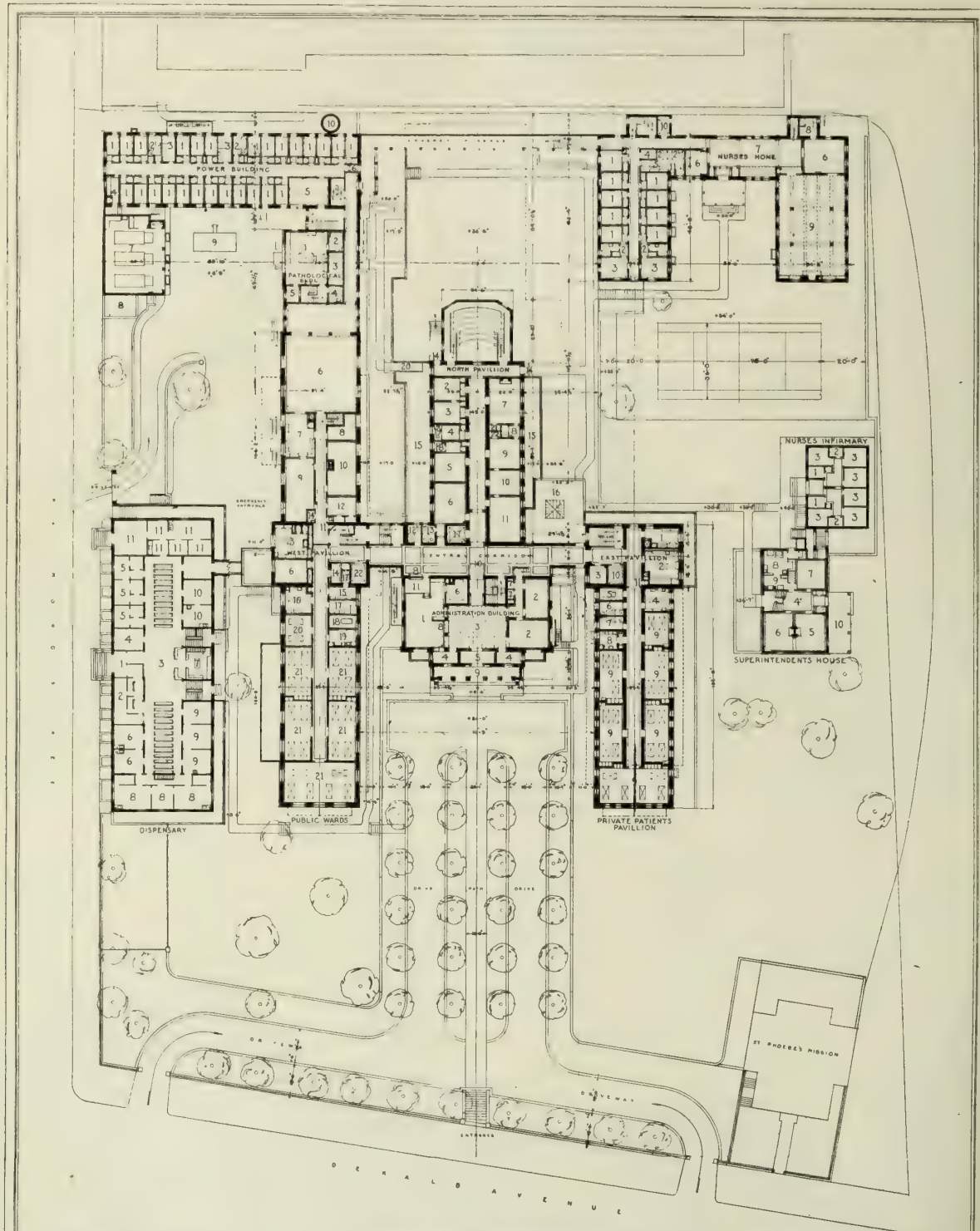


Fig. 7. Brooklyn Hospital. Showing screened balconies for ward patients. These balconies serve also as fire escapes, connecting adjoining buildings at all floors, obviating the necessity of fire escape stairways.

THE MODERN HOSPITAL



GENERAL PLAN SCALE IN FEET 0 5 10 20 30		WEST PAVILION AND PATHOLOGICAL BLDG.		NORTH PAVILION	
THE BROOKLYN HOSPITAL RAYMOND ST AND DE KALB AVE BROOKLYN NEW YORK LORD HEWLETT AND TALLANT ARCHITECTS 345 FIFTH AVE. NEW YORK, N.Y.		1 LABORATORY 2 DARK ROOM 3 BACTERIOLOGY 4 LAVATORY 5 OFFICE 6 DINING ROOM 7 SERVING ROOM 8 DIETITIANS OFFICE 9 OFFICE HELP 10 INTERNES 11 CLOTHES CHUTE	12 HOUSEKEEPERS OFFICE 13 DIET KITCHEN 14 LINEN 15 NURSES ROOM 16 EXAMINATION ROOM 17 LAVATORY 18 BATH 19 SINK ROOM 20 QUIET ROOM 21 WARDS 22 ELEVATOR	1 LECTURE HALL 2 DIRECTRESS OF NURSES 3 ANTE ROOM 4 OFFICERS LOCKERS 5 VISITING STAFF ROOM 6 WOMENS WAITING ROOM 7 TRUSTEES 8 LAVATORY 9 SUPTS OFFICE 10 STENOGRAPHERS ROOM 11 LIBRARY	12 MENS TOILET 13 WOMENS TOILET 14 FIRE ESCAPE 15 AREA 16 FUMIGATION ROOM 17 ELEVATOR 18 LAVATORY 19 LAVATORY 20 INCLINE 21 TRUSTEES CLOSET 22 SUPTS CLOSET
DISPENSARY	NURSES' HOME	EAST PAVILION	ADMINISTRATION BLDG.	POWER BUILDING	NURSES' INFIRMARY
1 VESTIBULE 2 OFFICE 3 HALL 4 SERVICE 5 MEDICINE 6 SURGERY 7 DRUGS 8 SURGERY 9 ORTHOPEDICS 10 GASTRO ENT 11 G.U. DEPARTMENT	1 BEDROOM 2 BATH 3 LIVING ROOM 4 LINEN 5 LAVATORY 6 RECEPTION ROOM 7 RECEPTION HALL 8 PANTRY 9 LIBRARY 10 ELEVATOR 11 CLOTHES CHUTE	1 DIET KITCHEN 2 NURSES ROOM 3 RECEPTION ROOM 4 EXAMINATION ROOM 5 BATH 6 MENS LAVATORY 7 WOMENS LAVATORY 8 SINK ROOM 9 WARDS 10 ELEVATOR 11 CLOTHES CHUTE	1 MAIN OFFICE 2 RECEPTION ROOM 3 LOBBY 4 ANTE ROOM 5 VESTIBULE 6 VAULT 7 TELEPHONE 8 COUNTER 9 PORCH 10 CENTRAL CORRIDOR 11 PLATFORM	1 BEDROOM 2 BATH 3 LAVATORY 4 LINEN 5 LOUNGING ROOM 6 TRUNK LIFT 7 GARAGE 8 ANIMAL HOUSE 9 SCALES 10 MAIN BOILER FLUE 11 TO NURSES CORRIDOR	1 BATH 2 DIET KITCHEN 3 BEDROOM 4 HALL 5 LIVING ROOM 6 STUDY 7 DINING ROOM 8 KITCHEN 9 BUTLER'S PANTRY 10 PORCH

Fig. 8. Brooklyn Hospital. General plan.



Fig. 9.



Fig. 10.

Figs. 9, 10. Brooklyn Hospital. Showing screened balconies for ward patients and individual balconies for private rooms, overlooking the park.



Fig. 11. Brooklyn Hospital. Dispensary. The building has forty-two rooms for examination and treatment of patients, the basement being used for orthopedic brace shop, plaster room, and gymnasium.



Fig. 12.

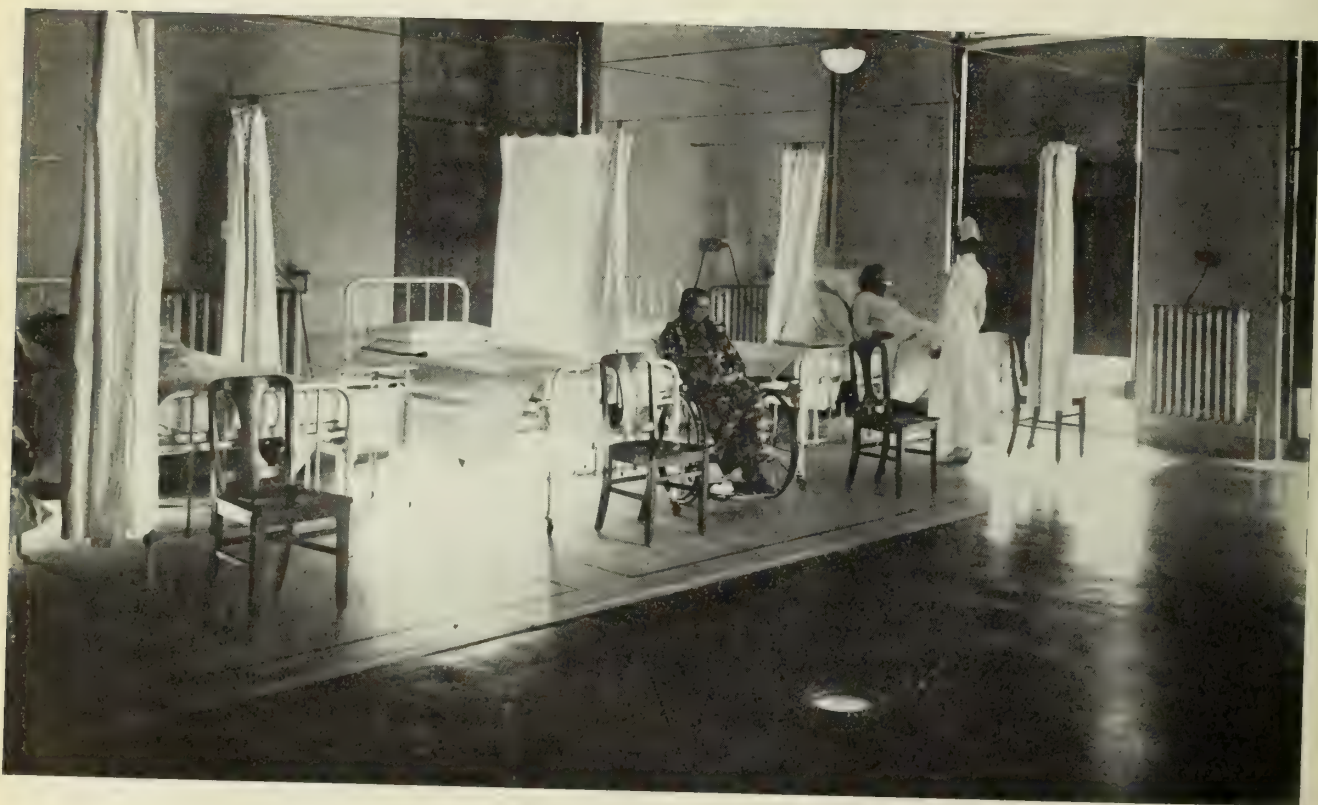


Fig. 13.

Figs. 12, 13. Brooklyn Hospital. Typical ward, showing curtains on wires (used for screening the beds); floor light, which is burned at night, thereby doing away with the nurses' lanterns; solid transoms, windows to floor, silent call system for nurses; terrazzo paneled flooring, with countersunk linoleum center; indirect lighting.

THE CONVALESCENT INSTITUTION—METHODS—RESULTS¹

Selection of Patients—Length of Stay—A Sample Convalescent Day—The Cycle of Convalescence—Sexes—Visitors—Diets—Medical Attendance—Work Therapy—Play Therapy—Preventive Convalescence

By FREDERIC BRUSH, M. D., SUPERINTENDENT THE BURKE FOUNDATION, WHITE PLAINS, N. Y.

THIS brief paper, to be effective, should be taken as supplement to the one entitled "The Convalescent Field," appearing recently in THE MODERN HOSPITAL, and dealing with the needs and kinds of convalescence; also in conjunction with the Burke Foundation annual report of 1915-16.

We may at the outset assume rest, high-feeding, ample outdoors, sympathetic care, etc., in all convalescent homes, and proceed at once to consider only the most important phases in this developing branch of public health—the advances and the main problems.

Several great endowments are at this time awaiting application in the convalescent field. Their directors are wisely proceeding very slowly. They feel, for one reason, that the older standard type of "home" fails to give the model—the adequate full motive. The problem crystallizes as follows: *With social service accomplishing what it clearly does at 75 cents, or less, per-day-capita, the convalescent institution must show irrefragable cause to exist and spend \$1.50.* The Burke Foundation is urging each of these groups to select measurably separate fields—the opportunities exist.

To have a program, an ideal, a plan, is of the first importance. This Foundation, for instance, applies itself to workers, producers, persistent triers in life, who cannot fairly pay—those reconstructible into wage-earners, home-makers, citizens. Through exceptional plant and equipment it is enabled further to accept constantly the more difficult convalescent cases; and, thirdly, by steady experiment at a considerable expense, to extend convalescent paths for others to follow—as with cardiacs, hyperthyroids, observation nerve and mentals, drug addicts, recent surgery, etc.

Much has been said about making all convalescent places homelike. But we are frankly institutional, and accomplish most in our line by being so. The majority of convalescents have been pampered, overindulged; it is the most malleable condition in life. Doctors, nurses, and friends at this time start the makings of neurasthenics and dependents, and convalescent homes not infrequently promote this deviation.

Patients are from the first fully immersed in

our strong atmosphere, the "spirit of the Burke Foundation," one of self-help, self-respect, self-mastery, and the urge to normal life—a spirit that palpably exists, and is more important than buildings, air, food, rest, etc. We shock certain patients at the outset, and gain thereby a week or two of mental progress. Effects are comparable to those of the college on youths, only swifter and more gratifyingly measurable with this most impressionable group.

In this relation our nonpay provision is proving very important. It gives unexpected power for good. With this control of the selection and behavior of patients, a large health plant can be gradually upbuilt that may be actually more efficient than the well-known expensive ones of Europe.

Selection of patients.—Of importance equal to their care, and the main weakness in most convalescent home workings. No excellence in treatment can make up the wastage of a faulty choice. An admitting office or person, given a plan and full authority, is essential to best results. Various unfair influences always need repressing at the admitting end. Even the president of our institution insists, when recommending an applicant, upon an impartial decision.

Our admission office is further made to function widely in the city's public health. Through admission alone a home may become a most attractive stopping place, and at the same time a partial failure in convalescence. Social service departments choose best—doctors worst.

Length of stay.—Each patient should be judged individually as to this, which means frequent examinations, reports, and trained judgments resulting from many factors. Some leave us rightly in six days—others after four months. The set period is a serious and prevalent weakness of our "homes," wronging both the patients and the funds.

A sample convalescent day.—Patient rises before 7, walks or plays with companions in the open, breakfasts at 7:30, rests out awhile, gets surgical dressing done, joins a group in some productive occupation, rests or plays, walks before noon dinner, then rests and sleeps on bed two hours (compulsory), reads, plays, or works until supper at 5, is out of doors till evening entertainment or dance, and to bed at 8:30 or 9. Inclosed

¹Discussion before the eighteenth annual conference of the American Hospital Association, Philadelphia, September 26-29, 1916.

places and extensive dry walks and sunny terraces make for like conditions in winter.

A cycle of our best convalescence.—Patient selected in hospital bed when half through illness, and instructed how to benefit from us, home mat-



Fig. 1. Men and women patients in a golf tournament.

ters arranged, patient sent as early as can be transported, induced to cooperate unreservedly while here, couraged and molded and studied frequently, and kept until beginning desire to re-enter normal life, sent back with follow card report and advice to social service department (which has the work and living arranged); and then perhaps reported back to us months later as holding at a higher point of health and success than in years previous.

The democratic spirit.—Planned for, held to insistently, curative. Special placings, favors, exceptions, etc., are but sparingly granted; the place kept wholesomely middle-class good; and all — peddler to preacher and patrician, Gentile, Jew and mongrel, made to enter positively into our uptending life. Ours is not a passive place.

Patients have thought they were misplaced, and going to leave us next day; but they have usually stayed and learned perchance some simpler, better ways of looking and living—got soul-convalescence. Remember that in the best times of any life, class distinctions sink away into gray background.

Sexes.—Many advantages of having both in one institution. The difficulties are minor and admin-

istrable. The biplay of sex association is decidedly convalescent. Dancing, for example, is the best of all recreations. Men and women should dance together. A woman who cannot walk will dance—then she walks. The first stages of flirtation (the limit in the institution) induce more right posture and manners and red cells and courage than all the mechanotherapy or lectures on how to live.

Visitors.—Visits to patients have been stopped after full trial and gradual reductions. Their ill effects considerably overbalanced their good; main consideration being that the mental therapy, so essential in this work, applies better without them. Individual exceptions are freely made, of course.

Diets.—But little individualized. This is part of the plan of normalizing. About a third come to us ready to become post-graduate food cranks. "The doctors have said so and so;" "I can't eat this and that;" "here is my list," etc. The answer is definite: "Eat like a going human being; you have wide choice at our table; extend the variety; surprise



Fig. 2. Patients playing base ball. A match between rival cottages.

your stomach; we will stand for the results." The worst are starved a day or so. Results of this method are excellent, and its psychology is important. Ten tons of weight were added to our patients last year. They eat astonishing quantities—our food cost holds up around 40 cents.

A valuable medical test results here; a persistent digestive trouble, under our rejuvenating conditions, almost invariably points to faulty or incomplete diagnosis, and saving redirection follows. Extra milk, and much olive oil in one- or two-ounce "cocktails," are given between meals to many, but only on prescription.

Results answer—e. g., 350 gastric and intestinal ulcer cases, mostly operated, have been convalesced, on but moderately restricted feeding, with nearly uniform success. Special dieting may well be done in the convalescent institution, but it should be kept narrowly apart for reasons above indicated. Food fussiness is one point of attack on neurasthenia.

Medical attendance.—A minimum for safety and comfort best in the convalescent institution; return at once patients needing hospital care.



Fig. 3. Women patients, jolly haymakers, in Burke Foundation fields.

This avoids duplicated efforts, and reacts valuably on the senders. Much doctoring and drugging directly counter the spirit we must create. For this reason routine physical therapy even, should be entered on cautiously. We throw away most of the bottles, and have a St. Anne's collection of crutches. One soon learns that convalescence, at its best, is fully half mental. Let the institution be "one thing or the other." A full paper might be presented on this subject.

Work therapy.—The convalescent place has the most difficult occupation problem because of the short average stay (three weeks). Our occupation is considered not chiefly diversional, but remedial, reconstructive, curative, convalescent—normalizing. It is not a side issue; it costs; it is our best medicine. It is prescribed, in writing,

for more than one-fourth—cardiacs, hyperthyroids, choreics, all the border mental and nerve folks, the inherently restless, all long stayers, the temperamentally difficult, the quitters, the pampered, the disheartened.

"The doctor said I could not work in three months;" "I have done nothing for the past year;" "They told me to go and rest as long as you would keep me;" "I cannot do anything because I have"—this or that. Our answer is work, supervised, graduated, moderate, giving quickly finished products. The patient never dominates; some who threaten to leave become later most appreciative. They are led to see that it is treatment—with a reason, and results. The city sources are helping. "Don't whine or kick up there; do as they wish and you will come back well; they have no motive but to restore you"—they instruct.

Results of the work cure, plus mental therapy, in selected cases are not so vague and unmeasurable as thought. They are in most instances definite and remarkably good. We have records of these people back at normal living. We are knowing that they were not lazy—only misled, mismanaged, misenviored.

Play therapy.—It does not suffice to provide apparatus; steady direction is needed. Tournament and group play are most valuable. We note often the good effect of one new outdoor game added to a narrowed life. The psychology is interesting; for instance, it is worth while to have men patients play a little baseball, even of a staggy or

dyspneic kind—it seems to signify recurring manhood to an American. I have first "got hold" of certain fear-ridden men through this best of games. Our cardiacs play it before graduation. An athletic field is essential equipment for convalescence.

Preventive convalescence.—In this undeveloped field lies mainly the justification of more and larger institutions. The term is somewhat inadequate—what is meant in practice? What are the facts? One hundred persons are sitting on the benches of a large dispensary; three to six of these should be sent out to a reconstructive country institution. Instead they will be given stock prescription repeats, some words, and be sent home. And note the one preventive convalescent in the street car group. Under every employer a small

percentage of workers are always tiring and failing. Many women of all ages are approaching health-break in their homes. Middle-aged men in all walks are feeling here and there the hopeless settling under cumulative permanent fatigue. Home convalescence, so feasible in many conditions, fails here. Nothing yet devised equals the convalescent institution in remedying these and like borderline states. The rejuvenation may hold for years.

Formative convalescence.—The upbuilding of cardiacs, neurasthenics, the pretubercular, hyperthyroids, and moderate defectives of various kinds are suggested hereunder. Youth is generally the favorable time for the effort. Making dependents and incompetents over into limited producers is worth while.

These two lines are in progress. The usual trained sources, along with department stores, contractors, clubs, hotels, industrial and public service corporations, etc., are learning to choose and send these people to us for preventive and formative convalescence. The dispensaries, which will be the chief sources in time, are as yet rather unresponsive. Along these lines the convalescent field needs most extension.

Results.—Nothing else known to medicine equals the effects of a fitting vacation. Weight and strength gains, blood enrichment, and the storage of nerve and other reserves would be thought wellnigh miraculous if brought about by some specific or less homely and natural means. Though a majority probably of American vacations are partial failures or worse, here remains a great medical fact—and quite underappreciated. Medical teaching essentially ignores it. A live example will best clinch this. Last year I had low weight, a spot of pleurisy, and several subnormalities. In three and one-half weeks of right vacation (for me) I gained twenty pounds and full vital reservoirs. I have ten of the pounds left, and it will be a year before I shall need even preventive replenishment (which proved that I am an expert in convalescence). No specific remedy even ever parallels such a result. Vacationing will yet be given more scientific direction. On this truth the convalescent institution basically rests; it is solid foundation.

Taking, then, the most effective restorative agency known, they adapt it to the half-sick, the handicapped and subnormal, the failing, the depressed. In such institution the patient goes under the expert in vacationing—*conditioning for daily life*. Sleep, exercise, rest, feeding, amusements, diversional and hardening occupations, companionships, care of minor ills, mental and moral slants, home betterments at the same time,

and future employment, are all studied and adjusted to the individual (placed free from money worry)—and the results are inevitably and inspiringly good. A successful convalescence sends the person away with the glowing eye of the ten-year-old—"the Burke Foundation eye," the social workers have come to call ours; or the "Burke Foundation face"—smoothed, smiling, courageous.

It is clearly seen that home convalescence, though of first importance and yet to be better managed, cannot substitute for a large amount of institutional convalescence, even as the field is now, partly undeveloped. And the before-mentioned preventive and constructive phases will demand institutions even more.

Finally, the *main question*—*what is the product* of these institutions and of this rather large expenditure per person? First, of course, great numbers of speedier and completer recuperations of the acutely ill. (And it should be said here that the lasting qualities of this standard convalescence are well known to those in the work—and important justification.) Now come the newer long-term and more testing phases, giving (ever with a small percentage of failures) end-products, which may be indicated as follows: cardiacs who have been much in hospitals and dependence strengthened to maintain steady occupation (cardiac youth especially successful and economically important); early nervous and mental borderliners of many kinds, turned back, by occupational and mental therapy principally, to fair livability and content; drug addicts, after the special treatment, likewise built up to point of hopeful retrial; rheumatics, in limited selection, given long terms, particularly for their hearts' sake, and at last sufficiently toughened for competition by graduated play and work; choreics, especially if young and in first attacks, discharged cured in six to ten weeks, and recurrences diminished; various subnormal youths set forward with weight, blood, nerve, posture, and character and educational additions that are fairly permanent; protracted surgical dressing cases in large numbers carried to earlier and solider healing plus hardening for work; operation avoided in some selected pelvic and like subacute inflammations; hyperthyroidism afforded long rest plus nerve and heart training with notably worthy results; nonpulmonary tuberculosis, quiescent pulmonary and the pretuberculous periodically reinforced for their continuing battle; pleurisies given especially long upbuilding; and a steadily increasing output of purely preventive and holding recuperations—these are some of the better and harder things now being done in convalescent institutions. Extensions are in prospect.

THE HOSPITAL AND THE SURGEON

The Making or Training of the Surgeon—The Selection of the Staff Surgeon—His Compensation—Promotion of Surgical Work—Regulation or Control of the Surgeon—Hospital Monopoly

By S. S. GOLDWATER, M. D., SUPERINTENDENT MT. SINAI HOSPITAL, NEW YORK

[Continued from October issue.]

III. AIDING THE SURGEON

Successful hospital surgery depends on many factors which are controlled by the hospital rather than by the surgeon. Hospital managers should appreciate the importance of these factors, and should see to it that the visiting staff are properly aided. Various measures designed to promote the success of the surgical department will now be considered.

The Choice of Assistants.—The choice of the assistant visiting staff rests usually with the hospital management rather than with the visiting surgeon. On the supposition that hospital control is best intrusted to an impartial lay board, one must assent to the choice of the visiting surgeon's assistants by the trustees. I have already pointed out the possibility of a system of cooperation with the medical staff in the nomination of eligible candidates for the position of visiting surgeon which, while reserving to the trustees the final choice, nevertheless insures due regard for enlightened professional opinion. The system described may advantageously be followed, also, in the appointment of assistant visiting surgeons, with the proviso that the medical men serving on the conference committee shall include the chief of the service with which the assistant visiting surgeon is to be identified.

Laboratory Cooperation.—The hospital surgeon may be aided or hindered by the pathological department. For the sake of both surgeon and patient, the hospital is bound to provide a well-equipped and well-manned pathological department. In hospitals having a large surgical service it is desirable that the equipment necessary for the preparation of sections for diagnostic purposes be provided in a room adjoining the operating room, and that a pathologist be at hand during operating hours. Apart from the performance of routine diagnostic work, the laboratory must be ready to prepare microscopic sections extensively for study, must be ready to perform autopsies promptly and satisfactorily, and should make it a point to arrange such autopsies at a time which is convenient to the surgeons concerned, since a post-mortem examination in a surgical case loses much of its value to the hospital if performed in the absence of the surgeon.

Radiography as a Diagnostic Aid.—From the standpoint of diagnosis the importance of the

radiographic department to the surgeon is inestimable. Hospital radiology has been seriously handicapped because of the hesitancy of hospitals to devote large sums to the support of this comparatively new department. There is no logical reason why the radiographic department should be singled out as one to be placed on a self-supporting basis—a poor patient is no less deserving because he happens to require a costly x-ray examination. It is significant, however, that in almost every instance in which a hard-pressed hospital has endeavored to make its x-ray department self-supporting, the effort has succeeded. From the surgical standpoint it is essential that the radiographic department be properly equipped and organized, and experience has shown that, by one means or another, it is practicable to accomplish this in any hospital.

Photography to be Provided.—Though of relatively minor importance, photography as well as radiography should be made available to the surgeon; photography in connection with surgery has a medico-legal as well as a scientific value.

Administrative Problems in Relation to Anesthesia.—The surgeon is greatly dependent on the anesthetist. The risks of anesthesia should not be disregarded, and will not be underestimated by anyone who has encountered fatal idiosyncrasies in patients. In a difficult case the skill of the anesthetist may be of no less importance than that of the surgeon himself. Perhaps the most common hospital practice is to utilize the interns as anesthetists. This means a frequent change in the office of anesthetist; the only advantage of the system is to provide a moderate degree of training and experience in this field for a comparatively large number of men. From the standpoint of medical education, the hospital ought not to discontinue the training of its interns in anesthesia, but such training should not consist in mere unregulated experience, acquired at the expense of patients. A competent instructor should be provided, and the intern should not be left to his own devices until his competence is assured.

The Nonmedical Female Anesthetists.—The tendency of the time is away from the use of the intern as anesthetist and toward the employment of permanent anesthetists. It is supposed that through continuous practice a high degree of skill will be developed; hence paid resident

anesthetists holding medical degrees have been appointed. This is a rather costly expedient; moreover, the medical anesthetist who acquires a local reputation is soon tempted to abandon the hospital in order to engage in lucrative private practice. The cost of a competent male medical anesthetist and the difficulty of holding him in the service of the hospital have led in some cases to the employment of women anesthetists who are commonly graduate nurses with operating room training. Eminent surgeons express themselves as satisfied with the service performed by such women, and argue that women are naturally better fitted for the work than men, quite apart from other considerations.

The Legal Status of the Nurse as Anesthetist.—As yet the number of court decisions on record is not sufficient to show whether graduate nurses may, with impunity, practice as anesthetists. The opinion of lawyers in New York state is that surgeons may employ women in the capacity named, but that in doing so they, the surgeons, assume liability for the result. If the administration of anesthetics is a part of the practice of medicine, anesthetics may be administered only by responsible licensed physicians. If a surgeon chooses to employ an anesthetist having no legal medical qualification, he thereby tacitly assumes full responsibility for and undertakes to control the anesthesia, the anesthetist being regarded merely as his technical assistant. This aspect of the matter is presented because of the practical considerations involved. I refrain from introducing at length the opinions of legal authorities, but feel bound to point out that wherever the legal status of the anesthetist is doubtful, the hospital owes it to the surgeon to adopt a system under which both surgeon and anesthetist are protected.

The Need of an Active Consulting Staff.—No surgical service can be regarded as satisfactorily conducted which does not systematically consult with an internist as well as with other specialists, medical or surgical, whose advice may be required. Experience has shown that a consulting staff which does not visit the hospital daily is not as serviceable to the surgeon as a regular visiting staff. The surgeon who is most advantageously placed (it would perhaps be more logical to speak of the advantageous position of the patient) is one who is connected with a general hospital the organization of which includes representatives of all the recognized branches of medicine and surgery.

The Nursing Staff.—The surgeon, as we have seen, is largely dependent on the pathologist, the radiologist, the anesthetist, the internist, and other consultants. Another indispensable aux-

iliary is the nursing staff. Both in the operating room and in the post-operative care of patients in the wards the surgical nurse plays a very important role—just how important may be inferred from the fact that an eminent surgeon has recorded the opinion that his success in practice has been due more to the ability and loyalty of his nursing assistants than to any other single factor. The hospital, through its training school, is responsible for the education of its surgical nurses; they must be satisfactory in quality and sufficient in number.

Special Nurses.—The inelasticity of the average nursing organization is a drawback. The need for nurses in the surgical wards varies from hour to hour, and efforts must be made to respond to this variable demand. One expedient is to employ a certain number of extra nurses or "floaters," ready for assignment to any ward where the pressure is momentarily great. The hospital should be willing to employ special nurses whenever the nursing requirements are such that the regular ward force is unable to meet them.

Clinical Records.—It is a matter of common observation that clinical records are not as complete in surgical as in medical wards. Whether clinical records are well or ill kept depends primarily on the surgeon. But while the making of the record depends on the surgeon and on his control over his assistants, the filing of the record is a matter of hospital administration. In this department centralization is the avenue to success; centralization implies, of course, a record room, filing devices, and a paid registrar, and these it is clearly the duty of the hospital to provide.

Reciprocity Among Hospitals in Regard to Records.—In large cities a patient may be successfully treated in a number of institutions. When this occurs, the hospital which was first to handle the case owes a complete record to the institution which undertakes the later treatment. Reciprocity in these matters is now satisfactorily established in many communities, but satisfactory service is not feasible in the absence of a suitable organization in the record room. That there can be no satisfactory collation of clinical data for scientific study without proper filing and indexing is obvious. In the choice of nomenclature, standard classifications which are in general use should be preferred.

"Continuous" Service—Rest and Travel.—The interests of surgery itself demand that the surgical service of the hospital shall be of the "continuous" variety. This does not mean that the chief of staff must be on actual duty every day in the year, but that his control over the service shall be continuous; due allowances must, of

course, be made for necessary periods of recreation, including periods for rest, travel, and study. The most successful surgical organization in the United States is perhaps the least self-centered. Its members make a point of informing themselves concerning the activities of other clinics throughout the country and abroad; this is accomplished by means of traveling representatives. This spirit of interest and method of observation are worthy of emulation. A disposition on the part of the surgical staff to keep in touch with the work of other surgical clinics should be freely encouraged by the hospital.

Segregation of Surgical Material.—Scientific progress can be promoted in large hospitals by permitting and encouraging individual surgeons to concentrate on certain types of cases. Such a segregation of surgical material may involve a departure from the fixed form of the hospital's organization, and this may result in personal opposition to the plan; but such opposition cannot be defended if all the members of the staff are granted equal opportunities.

Operating Rooms—The Number Required.—The hospital should place at the disposal of the surgical staff operating rooms which are sufficient in number and equipment, with an adequate personal organization. The number of operating rooms cannot be fixed by rule, but must be determined by the requirements in each case. The size of the operating plant of a hospital maintaining a given number of surgical beds should be calculated with relation to the proportion of ward and private beds, the number of emergency cases treated, the number and organization of the resident staff and of other available assistants. For a given number of ward cases, in the hands of a small staff, fewer operating rooms are required than for the same number of private patients treated by many different surgeons. The facilities should be such as to permit of the prompt treatment of all emergency cases. Thus, if it be estimated that an average of five or six surgical cases will be treated daily, and that these can be handled successively in a single operating room, a second room should nevertheless be available for emergency use.

The Surgical Ward and Its Accessories.—What has just been said indicates that, in the very planning of the hospital buildings, a surgical service may be made or marred. The plan of the surgical ward very materially affects not alone the convenience of the surgeon, but the comfort of the patient. A large ward designed for an acute surgical service should have recovery rooms, where post-operative cases may be cared for without causing distress to other patients; separation

rooms for moribund or delirious patients, or for patients with foul wounds; rooms where convalescents may take their meals amid appropriate surroundings; rooms or wards for surgically complicated contagious cases; and balconies or roof gardens to which convalescents may resort when out of bed and where septic cases may receive fresh-air treatment.

The Reason Why the Poor and the Rich Should be Accommodated in the Same Hospital.—From the standpoint of personal efficiency, a hospital which conducts a charitable service pure and simple is at a disadvantage as compared with one which combines with its charity service accommodations for private patients. As a rule, hospitals require their surgeons to give gratuitous service to ward patients. Time spent in traveling from one institution to another is lost, and, if the surgeon is obliged each day to spend one or two hours in this way, the loss will fall, at least in part, on the hospital and its ward patients. Maximum personal efficiency presupposes minimum lost motion. This can be accomplished only if the hospital is so organized that all of the institutional and most of the professional activities of the visiting staff, whether in relation to private or charity patients, are carried on in a single establishment.

Organization of Out-patient Department.—The organization of the out-patient department is not a matter of indifference to the visiting surgeon. This department should be prepared to take over the care of all ambulatory convalescents. The retention of ambulatory cases in hospital wards is wasteful, and may result in retarded recovery. Each hospital must, therefore, have its out-patient department, and this department should be organized in relation to the in-patient service in a manner which will assure continuity of treatment where such continuity is desirable.

Social Service.—The advantages of a social service organization to the surgical division of a hospital have been so eloquently and so convincingly described by many writers that I dismiss the matter here with this brief reference.

Branch Hospital for Convalescents.—The branch hospital or hospital for surgical convalescents is another feature of hospital organization which has been fully discussed elsewhere. The day of the country branch hospital is rapidly approaching. It will open up a new era in hospital economy and efficiency.

End-Result Investigation.—The investigation of surgical end-results is a matter of serious importance. The employment of special workers to carry on end-result investigations in the field is now the practice of a number of hospitals. De-

spite the cost involved, such proposals should be sympathetically received by hospital administrators. The hospital is one of the greatest of existing social institutions, supported in this country at a total cost which staggers the imagination. *The value of its output must not be assumed, but must be proved.* The altruistic hospital surgeon will not permit his equanimity to be disturbed by the revelations of end-result investigations; if the disclosures are sometimes surprising, they are always instructive.

Autopsies and the Law.—The scientific value of autopsies and their corrective influence on surgical diagnosis and treatment are such that every hospital should appoint a member of its medical or administrative staff to assist in procuring them, and should also take an active part in the movement to obtain more liberal autopsy laws.

IV. REGULATING THE SURGEON

I have indicated many ways in which the hospital can and should assist the surgeon. Let me now turn to another aspect of the relations between the hospital and the surgeon. Superintendents assert, and surgeons do not deny, that the activities of surgeons need to be regulated; phases of regulation will therefore be considered.

Impartiality in the Admission of Patients.—The hospital owes certain duties to the sick poor. One of these duties is to conduct its admissions in a strictly impartial manner. Medical urgency and not personal influence should determine the order of the admission of patients.

While the hospital is endeavoring to fulfill its duty toward the public, the surgeon is endeavoring—in a similar fashion, but on a different plane—to take care of his own clientele. The surgeon's clientele is more limited than that of the hospital, and the surgeon can hardly be blamed if he does not take cognizance of needs which are beyond his ken. The surgeon very naturally looks to the hospital to care promptly for patients in whom he is personally interested, and in his eagerness to serve these patients he brings to bear on the admitting officer of the hospital the heavy pressure which his office and personality enable him to exert. To such pressure the hospital cannot conscientiously yield. The argument is sometimes made that the hospital should give preference to patients in whom its visiting surgeon is interested, by way of compensating the surgeon for his hospital work. This argument is fallacious. If the hospital owes anything to the surgeon, it has no right to discharge its debt at the expense of the friendless poor.

Regulation of the Discharge of Patients.—

In the matter of the discharge of patients, as well as in connection with their admission, it is at times necessary for the hospital to take cognizance of and to regulate the activities of its staff. The surgeon who is zealous in the pursuit of science will naturally take greater interest in some patients than in others. A patient who, from the scientific point of view, is regarded as undesirable, may nevertheless have a strong claim on the care of the hospital. Influenced, perhaps unconsciously, by the trend of his scientific interest, the surgeon may propose to rid his service of a patient who should not be discharged.

When the hospital is working under such pressure that beds cannot be provided promptly for applicants in whom the visiting staff are interested, the attending surgeon, quite without culpable intent, may persuade himself that the period of hospital treatment has been unduly prolonged—that laparotomy cases, for example, can be safely ordered out of bed within an incredibly short time after operation. Whatever the merit of the surgeon's point of view, the hospital administrator is bound to consider independently the justice and the wisdom of discharging each patient. The hospital may and should take cognizance of social facts which the surgeon cannot be expected to know or to consider.

The foregoing remarks must not be interpreted as signifying a belief on the part of the writer that in these matters surgeons are guilty of moral or mental obliquity. They are, as a rule, normal human beings, whose minds functionate like the minds of other human beings. The surgeon simply has the defects of his very valuable qualities; his work is intensive, and his field of vision is apt to be narrowed accordingly.

At What Hour Should Routine Operations be Performed—and Why?—In most hospitals routine operative work is begun at a specified hour, which may be a morning or an afternoon hour. If it is the prevailing practice of the surgeons of the community to attend to office practice in the morning, the hospital surgeon will prefer to attend to his hospital operative work in the afternoon; yet the very surgeon who adopts this regime may express a preference for early morning as the time of choice for grave surgical operations in the case of private patients. There is an inconsistency here which demands attention. If the surgeon believes that there are physiological or clinical grounds for a certain choice of hour, by what right does he deliberately arrange to operate on hundreds of ward cases at a less advantageous time? From the standpoint of hospital administration, the proper way to deal with this

question is to ascertain the consensus of authoritative opinion, and to act accordingly.

Postponement of Operations.—Conflict between the hospital's interests and the private interests of the surgeon occasionally takes the form of the postponement of an operation on a ward patient after preparation—in other words, after a day of starvation and anxiety. There may be sound reasons for the postponement of an operation for which preparations have been made, but, when the reason given is no more serious than a social engagement, the hospital is bound to protest. It must not be inferred that incidents of this kind are frequent, or that, in the belief of the writer, surgeons generally put their own comfort and convenience before the interests of their patients; the contrary is the rule.

Fair Play to Interns and Nurses.—In the management of the hospital's surgical service, a minor matter, but one which demands attention, is the right of interns, operating room nurses, and other employees to regular meal hours. The physical and mental strain associated with surgical operations is not confined to the chief surgeon. His assistants, each striving to perform the duty assigned to him, are frequently subjected to very severe strains. Emergency work is forever turning up in operating rooms at uncomfortable hours, and assistants are compelled to adapt themselves to the situation. As a rule, they do so ungrudgingly; but their sacrifices must not be lightly passed by. Such sacrifices may be sanctioned when their purpose is to save life or to alleviate suffering, but not in order to enable the visiting surgeon to keep a dinner engagement.

The Control of Surgical Supplies.—It is worth while in any hospital to review periodically the distribution and consumption of surgical supplies. This must not be done in such a way as to hamper the surgeon in his work, but solely with a view to the prevention of unnecessary waste. If properly appealed to, surgeons are nearly always ready to cooperate with the hospital management. A standing committee of the surgical staff may be designated to exercise control over the use of supplies. A surgeon's principal interests, however, lie in other directions, and this must be taken into account in any system of control that may be adopted. Precisely because the surgeon's principal interests lie elsewhere, a permanent committee of control, after a period of activity, is likely to adopt a more or less platonic attitude toward this special economic function. In order to spur the surgical staff into renewed interest from time to time, the appointment of special subcommittees, instructed to deal with particular phases of waste, is a valuable expedient.

V. HOSPITAL MONOPOLY

Multiple Hospital Appointments.—That the acceptance by a single surgeon of a large number of hospital appointments usually results in a skimping of work in one institution or another is the testimony of experience. Protests against multiple hospital appointments may be and have been made on other grounds—for example, on the ground that the concentration of hospital privileges in the hands of a few men debars others, who may be equally deserving, of the opportunity for self-development, and thus unduly limits the public in the choice of its surgeons. To this latter argument considerable weight must be allowed, but not so much as to lead to the indiscriminate scattering of hospital appointments among unqualified persons, or to the substitution of the open hospital for the staff hospital in communities where, by means of a limitation of staff appointments, a distinctly higher grade of surgical work can be achieved.

"Open" vs. "Closed" Hospitals.—The writer does not believe that in a small community a hospital is justified in adopting a staff organization merely for the purpose of limiting hospital privileges to some of the physicians practicing in the locality, while others, few in number, and perhaps equally competent, are excluded. In determining whether a hospital should be "closed" or "open" one must consider the size and character of the community, the number and the characteristics of the men practicing in the community, and the effects of the adoption of either policy. In New York, Philadelphia, or Chicago a hospital which opens its doors to the general profession thereby places itself out of the running so far as any important contributions to science are concerned, although it may, by the adoption of the policy of the open door, confer a favor on many would-be and some real surgeons.

Age Limit.—In the larger cities a better and safer check on surgical monopoly than is offered by those who suggest the abolition of staff organizations is afforded by the adoption of an age limit. Hospital after hospital is recognizing this principle. Some ten years ago a hospital which was about to be reorganized sought, by means of a widely distributed questionnaire, to ascertain the extent to which hospitals in this country had undertaken to retire members of their visiting staffs on account of age. Although an age limit rule had long been in force in the public hospitals of France, in the leading voluntary hospitals of Great Britain, and in the medical service of the United States army and navy, it was ascertained that neither the municipal nor the voluntary hospitals of this country had yet given serious con-

sideration to this question. Since then much progress has been made. There are few important hospitals in this country today which have not either actually adopted an age limit rule or have not seriously considered doing so.

Excluding the Specialist.—Another form of monopoly to which attention may briefly be paid is the limitation of the surgical work of a "general" hospital to such work as the general surgeon is competent to perform. It is well known that the surgical specialists have made their way in this country in spite of the indifference or antagonism of general surgeons. The writer is not here attributing selfish motives to the general surgeon, but cannot avoid the conclusion that concentration on his own work has frequently prevented the general surgeon from viewing fairly and justly the rights of others or the needs of the community.

Let me illustrate: Five years ago an important municipal hospital was planning a large increase in the number of its beds. Although the hospital in question was known as a "general" hospital, it was notorious that in its medical organization the hospital had failed to take cognizance of the existence of such distinct and well-established specialties as otology and ophthalmology. The special training and equipment needed by otologists and ophthalmologists were conceded by every member of the staff. Under these circumstances, one might have expected, as part of a plan to more than double the capacity of the hospital, the recognition of these specialties. Nothing of the sort appeared in the program. When the omission was called to the attention of the staff, the reply was that there existed in the community private hospitals where these specialties were practiced. The irrelevancy and inconsistency of the reply became manifest when it was pointed out that there existed in the community also numerous private hospitals where general surgery was practiced. I venture to say that if committees of general surgeons were called together in twenty cities tomorrow and asked to outline a plan for the distribution of the surgical beds of a general hospital, less than 10 percent of the number would call for adequate recognition of the established surgical specialties.

From the point of view of the hospital, the needs of all classes of patients must be taken into consideration, and available beds should be distributed accordingly. The monopoly of the beds of a general hospital by general surgeons is no more justified than would be the appropriation of such beds by the specialists to the exclusion of the general surgeons.

"Special" Hospitals Not Desirable.—We must

not overlook the fact that the exclusion of the surgical specialties from the general hospital, whether deliberate or not, brings about a reaction which is prejudicial to the interests of the community and disadvantageous to medicine. Fail to give to specialists the recognition which is their due, and in self-defense they will organize special hospitals for their own purposes. For this we cannot blame them, and yet the organization of such hospitals is not desirable. From the standpoint of the patient, a well-organized and well-equipped special department in a general hospital is greatly to be preferred to a hospital manned entirely by a group of specialists whose practice and field of observation are anatomically restricted, who lack the stimulating and steadying influence of daily contact with men engaged in the pursuit of other branches of medicine and surgery, and who do not daily collaborate with such men in the treatment of complicated cases. Cooperative medical practice does not and cannot thrive in the special hospital as it can in the general hospital.

The "Staff" Hospital Bound to Justify Itself.—I have already expressed my preference for the staff hospital in large cities. I am not blind, however, to the interests of the general profession, nor lacking in sympathy for the physician or surgeon who has no hospital connection. While in large cities it may be necessary and in the interest of surgical efficiency to organize hospital staffs along lines which seem to the excluded outsider to be monopolistic and unfair, it does not follow that consideration should not be shown to men outside of the ranks.

A staff hospital which does not maintain the highest surgical standards cannot justify itself; nor can a staff hospital be held blameless if it does not train interns in excess of the number required to keep the staff full; each year men should be sent out prepared to take up hospital duty in the new institutions which are springing up everywhere, or ready, if need be, to perform safe and sane surgery apart from hospitals, especially in rural communities which lack hospital facilities.

Participation in Medical Education.—The staff hospital should adapt itself to the requirements of the medical school, if there be one in the community, so that, besides training interns to become surgeons, it may afford to undergraduate students, whose fortune it may never be to become surgical interns, some slight insight into surgical technic, some appreciation of the gravity of surgical operations, and a wholesome distaste for undertaking important surgical work without adequate training.

Are Hospitals Opposed by the General Medical

Profession?—That a staff hospital, well organized and well equipped, interferes with the earnings of the general practitioner, cannot be denied. The assertion is frequently made that the hospital competes, even that it competes unfairly, with the general practitioner. If those who advance this argument mean that a well-organized and well-equipped hospital offers to the patient, and especially to the poor patient, an excellence of treatment and a measure of safety which he cannot have in his own home or so long as he remains in the care of his family physician, the charge is true. It is far from true, however, that hospitals and hospital surgeons compete with the general practitioner in the sense that there exists between the two groups a conflict of interest and an open hostility. The charge that such hostility exists is not in accordance with the facts. In my own experience the surgical wards of a large hospital have been occupied almost exclusively by patients referred to the hospital, or to members of the staff, by general practitioners. Any competition that exists, therefore, does not exist between the hospital and the general practitioner, or between the surgical staff and the general practitioner, but between the physician's honest appreciation of the needs of his patient and his—i. e., the physician's—economic interests. It is to the credit of physicians that in this competition their higher instincts are almost invariably victorious, and that hospital wards are filled with surgical cases through the honesty and self-denial of physicians who, rather than undertake work which they are not qualified to perform, deny themselves the privilege and profit of performing surgical operations at home, and place at the disposal of their patients all that a well-equipped hospital has to offer.

Duty of the Hospital to the General Practitioner.—What can the hospital do for the general practitioner in return for his cooperation and support? It can make him welcome in its wards; it can cooperate with him by diagnosing, without charge or for a moderate fee, complicated cases requiring the combined study of various members of the staff; it can keep him informed concerning the admission and discharge of his patients; it can, where required, offer the use of its laboratories, its x-ray department, its departments for special therapy; it can conduct post-graduate courses for his benefit; and last, but not least, it can perform for him and for his patients a simple act of justice by selecting its surgical staff with an eye single to efficiency and public service.

Speers Memorial Hospital, Dayton, Ky., has launched a "whirlwind" campaign for \$50,000 with which to pay off the indebtedness of the institution, purchase new hospital equipment, and build a nurses' home.

RED CROSS NURSES FOR THE BORDER

Newly Organized Civilian Base Hospitals Drawn on for Service Along the Rio Grande

To reinforce the army nurse corps on the Mexican border, the War Department has obtained from the American Red Cross 125 graduate Red Cross enrolled nurses for assignment to camp and base hospitals distributed along the frontier from Nogales, Ariz., to Brownsville, Tex. Fifteen of these 125 are representatives of civil hospitals in which American Red Cross base hospital units have been organized by Colonel Jefferson R. Kean, Medical Corps U. S. A., the director general of military relief of the Red Cross. The nurses were selected by Miss Jane A. Delano, chairman of the national committee on Red Cross nursing service, whose department has over 7,000 enrolled graduate nurses. While Colonel Kean has organized twenty-five base hospitals, only eight of these will be represented in this detail of 125 nurses.

REPRESENTATIVES FROM RED CROSS BASE HOSPITAL UNITS

Harper Hospital, Detroit, Mich., to San Antonio, Tex.—Mary DuPaul and Donna Sutliff; Rochester General Hospital, Rochester, N. Y., to Nogales, Ariz.—Ruth M. Randall and Hazel Vegiard; Post-Graduate Hospital, New York city, to El Paso, Tex.—Isabelle MacMaster and Gertrude Williard; New York Hospital, New York city, to San Antonio, Tex.—Edith A. J. Howard and Marie K. Falconer; German Hospital, New York city, to Deming, N. M.—Katherine P. Duelle and Clara L. Horn; Boston City Hospital, Boston, Mass., to San Antonio, Tex.—Belinda Scanlan and Della M. Currier; Massachusetts General Hospital to Laredo, Tex.—Leonor A. Field; Cincinnati General Hospital to McAllen, Tex.—Cynthia Richardson and Elsie Magnus.

NURSES SELECTED FROM OTHER POINTS

Graduate enrolled Red Cross nurses selected from other points and the places assigned are as follows:

Denver, Col., to Nogales, Ariz.—Margaret B. Otis, Virginia Carnahan, Eva L. Fortman, Margaret F. Hamilton, Harriet H. Hart, Mae E. Walton, Mabel Light, Elizabeth M. Long, Helen M. Dixon, and Lenora Rall; Philadelphia, Pa., to Brownsville, Tex.—Edith L. Wood; Newark, N. J., to El Paso, Tex.—Ellen J. Thomas, Lilly Anderson, Clair Jones, Florence Hodgson, Lillian Fox, Grace Wilday, and Frances A. Long; Trenton N. J., to El Paso, Tex.—Linda K. Meirs; Cleveland, O., to Deming, N. M.—Ina May Clark and Mrs. Marie A. Shields; Canton, O., to Deming, N. M.—Mabel Firestone; Birmingham, Ala., to McAllen, Tex.—Eida E. Peterson, Mae Rowan, and Mattie Hinson; Augusta, Ga., to McAllen, Tex.—Emma L. Dozier and C. Elizabeth Thomas; Buffalo, N. Y., to Brownsville, Tex.—Dora Scheuer, Vera V. Dunkle, Mildred Engeland, Grace C. Hammond, and Jessie B. Mallory; Selma, Ala., to McAllen, Tex.—C. Marie Hansen; Dayton, O., to Deming, N. M.—Cora V. Moore; Commerce, Ga., to Laredo, Tex.—Katheryn Crowley; New Orleans, La., to Eagle Pass, Tex.—Lottie Glazener, Mary Ann Kief, Mary P. Little, and Maude F. Mims; Denver, Col., to Eagle Pass, Tex.—Anna May Barr; Camden, N. J., to El Paso, Tex.—Laura E. Wilde, Emily Jummel; Sioux City, Ia., to Llano Grande, Tex.—Nellie M. Porter, Katherine Aten, Edith G. Becker, Florence Griswold, Catherine Hoffman, Laura C. Leeder, Marie S. Ohge, Jenny C. Robertson, Cecilia Strief, and Abbie Taber; Crookston, Minn., to Llano Grande, Tex.—Hilda Twedten and Ida E. Twedten; Baltimore, Md., to Eagle Pass, Tex.—Florence P. Kennedy.

NEW ARMY TRAIN FOR THE MEXICAN BORDER

The Government's Task of Caring for Sick and Injured Soldiers Necessitated a Special Train Designed by Army Medical Experts and Pullman Car Designers —Commanded by Army Men

By MR. ALLAN G. GRINNELL, WASHINGTON, D. C.

THERE are now approximately 150,000 troops on the Mexican border, most of whom are untrained, unhardened militiamen. Thanks to the tireless efforts of the medical officers, the sick rate in the border camps has been extremely low. Since the Spanish War the medical department of the army has been preparing for just such an emergency, and it was ready for action the instant mobilization began.

On June 20 sufficient smallpox vaccine for the immunization of the entire state militia was sent to each mobilization camp, and enough typhoid vaccine for the first administration was also forwarded at the same time. As is well known, it requires at least fourteen days to complete the antityphoid vaccination, the second administration being accomplished seven days after the first, and the third seven days after the second. In all cases where the troops remained in the mobilization camps for a sufficient period, all three doses were given at the camps. The troops from a number of states were rushed to the border without waiting for complete immunization, however, and large quantities of the vaccine were sent from the army medical school (where it is manufactured) direct to the headquarters of the southern department, whence it was distributed to the camp surgeons on the border, with instructions to complete the immunization of each officer and enlisted man who had not been completely vaccinated at the mobilization camps. It will be seen, therefore, that every member of the militia who has been sworn into the federal service has been vaccinated against typhoid fever and smallpox, and that the tragedies of Chickamauga Park will not be reenacted.

In addition to these measures of prevention, the reserve medical equipment which the medical department has been accumulating since 1898 was at once available. Each mobilization camp not located at a post where the post hospital and medical supplies were available was immediately furnished (without requisition) with a camp hospital for the care and treatment of the militiamen who required such attention while in the mobilization camp.

According to army regulations, each militia organization is supposed to be fully equipped with the matériel and personnel before being "recog-

nized" by the Federal Government. Judging from former experience, however, the surgeon general of the army anticipated that many militia organizations which had inadequate medical equipment would be admitted to the federal service, and such has been the case. These organizations have been promptly furnished with the necessary supplies.

CONCENTRATION ON THE BORDER

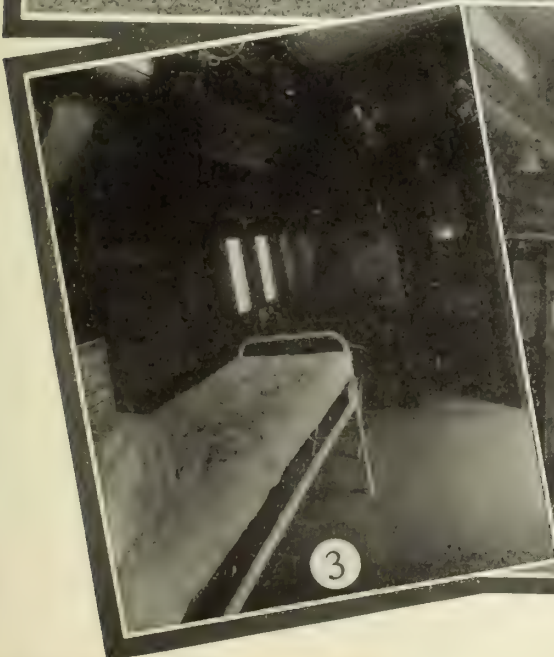
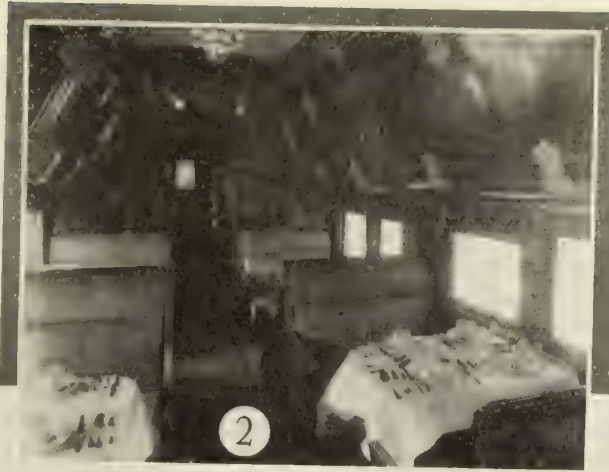
In addition to the regimental hospitals, field hospitals, ambulance companies, etc., with the militia organizations on the border, camp hospitals of 150 beds each have been established at Mercedes, McAllen, Llano Grande, Laredo, Eagle Pass, Del Rio, Marfa, Douglas, and Deming. Base hospitals having a capacity of from 350 to 500 patients have also been established at Brownsville and Nogales. Larger base hospitals (about 750 beds each) are located at San Antonio and El Paso.

While there are no "hardships" as known to military men in the routine life of the border camps at present, and the sick rate is lower than it would be among the same class of population at home, due to the most rigid camp sanitation and the constant teaching by precept and practice of military and personal hygiene, nevertheless it is inevitable that a certain amount of sickness and disability should occur among 150,000 troops, the majority of whom have been suddenly removed from the comforts and luxuries of civil life and stripped to the bare necessities of fighting men.

Without taking into consideration epidemics of typhoid fever and other infectious diseases, none of which are expected to flourish for the reasons given above, experience has shown that the medical department should be prepared to care for at least 3 percent of the command during mobilization and concentration and 10 percent during active campaign. For this reason the elaborate system of camp and base hospitals above referred to has been worked out. The trivial cases, or those requiring only short periods of convalescence, are cared for in the camp hospitals, the more serious cases being transferred to the base hospitals. A certain percentage of the latter will need to be transferred to a more invigorating cli-

mate and pleasant surroundings, especially those cases whose convalescence will be prolonged, such as eye, ear, nose, and throat cases, infected fractures, intestinal diseases, etc. These, fortunately, are few at present. For this reason,

and also because it is very important to keep the hospitals at the front depleted, so that in case of emergency they will be prepared to take patients up to their full capacity, a hospital train consisting of ten Pullman cars was designed



United States army hospital train. Fig. 1—Car No. 1, showing on the side of the car the caduceus of the medical department and the emblem of the Red Cross. Fig. 2—Dining arrangements. Fig. 3—Interior view of the side door opening into the medical ward on car No. 3. Fig. 4—Store room on car No. 8. Fig. 5—Lavatory on car No. 3.

and constructed at the Pullman shops, Chicago, and left for the border on August 14. In case of need, additional trains would be placed in operation.

Patients will be carried short distances along the border by motor and animal-drawn ambulances. All long-distance trips (and it must be remembered that the border stretches for a distance comparable to the distance from New York to Denver) will be made by hospital train. This train will also take the sick from the border hospitals back into the interior of the country to the big army general hospitals located at Washington, D. C., Hot Springs, Ark., and San Francisco, Cal. In case these become crowded, plans are also under way to establish general hospitals at Fort McPherson, Ga., Fort Oglethorpe, Ga., Fort Thomas, Ky., and Fort Sheridan, Ill., where post hospitals are now located.

The hospital train is commanded by Captain Howard Bailey, medical corps United States army, and has a personnel of three medical officers, twenty-five hospital corps men, and seven female nurses. It was designed jointly by Major Percy L. Jones, medical corps United States army, and Mr. Phlager, supervising constructor of the Pullman shops, and much credit is due to the Pullman company. As soon as this company was informed by the surgeon general's office that such a train was contemplated, it sent two of its officials to Washington, without expense to the government, who gave much valuable advice and suggestion to the medical officer who had the matter in charge, and the Pullman company has in every way cooperated heartily with the government in this enterprise.

The cars which make up the hospital train are regular Pullman cars, with the alterations and additional equipment indicated below. When the exigencies of the service demand, additional cars may be added to the train, or more trains made up.

CAR No. 1 (KITCHEN CAR).—This car is placed No. 1 in order to avoid the necessity of patients and personnel passing through it. It was originally designed for use in transporting troops, and meets the needs admirably. The kitchen is complete, with refrigerator, range, steam tables, movable serving tables, coffee urns, lockers, sinks, and lights, and has a 600-gallon water capacity. The kitchen portion of the car is about one-third of its entire length. The remainder, with partition and swinging door, is equipped with fourteen sleeping sections, having all conveniences, to be used by the personnel and civilian helpers.

CARS NOS. 2 AND 9 (FOR AMBULANT CASES, INCLUDING OFFICERS' WARD).—Car No. 2 has all the necessary conveniences for ambulant cases, and is practically unchanged, except for the addition of a cabinet for medicines, desk, and chair for attendant, additional fans, and thorough screening throughout. It will accommodate 22 patients, allowing a whole berth for each. Car No. 9 is identical with No. 2, except that a portion of this car has been sectioned off for the use of sick officers who are able to walk. Those officers who are strictly bed cases will be placed in a patient car and curtained off.

CARS NOS. 3, 4, 6, AND 7 (FOR LITTER CASES).—These cars are Pullman type 1383D. Two side doors about 4 feet wide have been cut opposite each other near one end of the car to facilitate the admission and removal of litter cases. The end entrances have also been widened so as to easily admit the standard army stretcher. The upper berths have been left intact with entire Pullman equipment. The lower berths have been taken out, and fourteen comfortable hospital beds 6 feet 4 inches long by 30 inches wide, fitted with standard National springs and felt mattresses, have been substituted. The legs of these beds have been provided with flanges, so that each may be quickly and permanently attached to the floor. Each of these cars provides for fourteen bed cases and fourteen ambulant cases (upper berths). The following additional installation has been made in each car: call bells and individual lights at each bed; additional fans, lockers for linen, cabinet for medicines, and an additional ice water tank, giving a total capacity of 150 gallons. A desk and chair have been provided for the attendant, ample shower baths have been installed, and all windows and doors have been thoroughly screened.

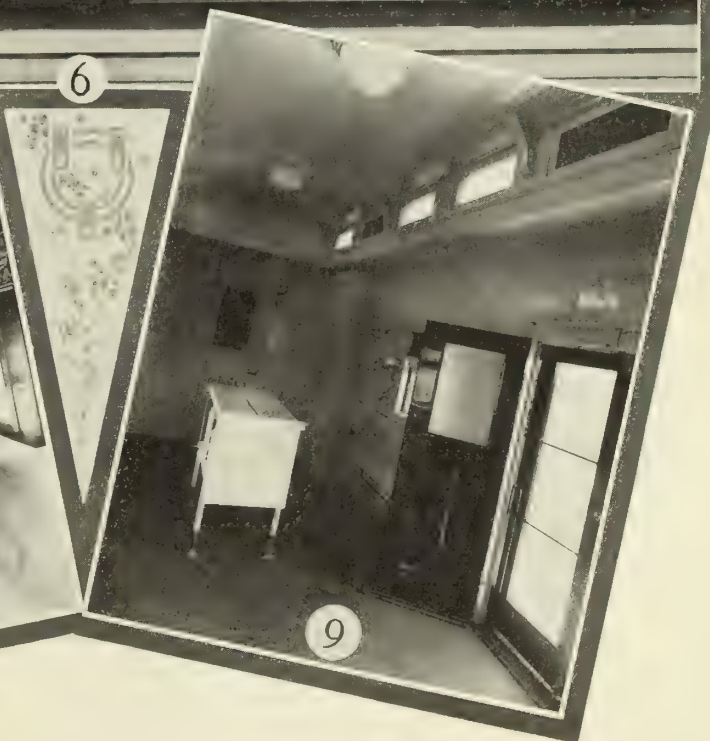
CAR No. 5 (OPERATING AND RECOVERY ROOM).—A 25-foot section (about one-third the length of this car) has been partitioned off for use as an operating room, and is equipped with all of the hospital appliances of a modern army hospital in the field (minus tentage and other unnecessary camp equipment). Four additional windows have been cut for ventilation and light, and also two 4-foot side doors. A composition floor has been laid, and the interior of the operating section has been painted a very light gray. The remaining two-thirds of this car has been stripped completely of lower berths, providing space for ten hospital beds. This section is for the most serious cases and to serve as a recovery room.

CAR No. 10 (SLEEPING CAR FOR DOCTORS,

NURSES AND ATTENDANTS). This car accommodates one commanding officer, two assistant surgeons, and twelve nurses, allowing an entire section to each and one large drawing room for all.

CAR No. 8.—This car is built in sections similar to car No. 5, except that the compartment used as an operating room in No. 5 is used as a baggage room. The other section is similar to the corresponding section in car No. 5, and used for the same purpose.

In all cases where Pullman equipment has been removed, the regulation army medical equipment has been substituted. This new train is entirely different from the hospital trains of the Spanish War, which were standard Pullman cars, practically without modification. To load these cars it was necessary to detach each car from the train and pass the litter patients in through the open end, the side doors being too narrow to admit the standard army litters.



United States army hospital train. Fig. 6—Car No. 3, showing the side door opening into the medical ward. Fig. 7—Medical ward, showing closed door leading into first-aid dressing and operating room on car No. 8. Fig. 8—Medical ward, showing entrance into first-aid dressing and operating room on car No. 8. Fig. 9—Interior view of first-aid dressing and operating room on car No. 8.



Queensborough Hospital. Front view.

QUEENSBOROUGH HOSPITAL PLANNED LARGE, BUILT SMALL

One of the Newer Institutions of the New York City Department of Health May Grow Indefinitely and Retain Harmonious Form—Some of the Details of Construction and Aims of the Architect and Consultant

THE Queensborough Hospital is one of the newer hospital groups of the Department of Health of the city of New York. It is at present intended only for contagious diseases, but may be developed later into a hospital of a more general character. The plot, comprising about eleven acres, is located on a rise of ground one mile north of Jamaica, facing Flushing avenue on the west and the Jamaica and Flushing trolley line on the east, in the borough of Queens.

While the building just completed, an illustration of which is shown, is the only one thus far erected, yet the entire hospital scheme has been carefully outlined. The hospital group, as planned, comprises eighteen buildings, with roadways, service lines, etc., so located that, whatever the rate of development may be, it will tend, both practically and architecturally, toward a harmonious whole. With the above development in mind, the present building was planned and studied in connection with the next building of the plant to be erected later—namely, the nurses' home—which will temporarily house, in addition to the nurses, the administration, the medical staff, and some of the help.

The present building has ample provision for observation and isolation. The first story contains in the south wing the admission room, with a toilet having a portable bath, which may be taken to any of the observation rooms as desired;

also ten observation rooms, where patients can be isolated pending diagnosis before being regularly admitted to the wards. These rooms can be served from a common corridor, or can be cut off and served entirely from the glass-covered porch.

The north wing contains three small wards, each with adequate independent bath and toilet facilities. The northernmost one will be used temporarily as the resident physician's apartment. The central portion of the building contains the nurses' rooms, diet kitchens, office, attending physician's room, and dining room. All first-story rooms open on to covered porches.

The second story contains four wards divided into cubicles, so that there will not be more than two beds to each cubicle, insuring almost perfect isolation. The cubicles can be screened so as to serve either as quiet rooms or as examination rooms if desired. The partitions are glass above the bed line, so that the nurse may have the entire ward in full view from any position. In connection with these wards there are shower baths, baby shelf baths, and every convenience of modern plumbing necessary for hospital service. At the ends of these wards are two screened open-air porches, and in the center, in this story, are the nurses' and treatment rooms and a large convalescents' room or play room. These wards are arranged with large casement windows, to permit open-air treatment when desired.



Fig. 5. Queensborough Hospital. Third floor plan.

1, 10. Porch roofs.
2, 9. Wing roofs.
3. Toilet.

4, 5, 6. Closets.
12, 13, 14. Closets.
18, 19, 20. Closets.

7. Stair hall.
8, 15, 16, 21. Dormitories.

11. Corridor.
17. Linen closet.

The third story contains the dormitories and rooms for the nurses and help, with all necessary conveniences. The basement contains the kitchen, dining room, store rooms, drug room, and boilers. The heating system is laid out for later connection to a central power house. The laundry work will be done in the large laundry of the Kingston avenue plant of the Department of Health until the Queensborough plant is further developed.

The building has been finished in the most sanitary manner with smooth walls, flush trim, rounded corners, tile floor, sanitary base, and marble linings about all plumbing fixtures, and is

designed to care for a large number of patients at small expense. The construction is reinforced concrete skeleton, with hollow tile filling, stucco finish, and red Spanish tile roof.

It was the purpose of the architect, William E. Austin, of New York city, to give a pleasing building through good proportions and without expensive ornament. How well this purpose has been accomplished may be judged from the illustration and from the fact that the building, complete with the fittings above described, was erected within the city of New York at a cost of only 33¾ cents per cubic foot.

CANNED FRUITS—THEIR QUALITY, PURITY, AND PRICE¹

General Character of Fruits Used—Quality of Syrups and Weights as Compared With Label Claims—Apples—Apricots—Cherries—Peaches—Pears—Pineapples—Plums

By JOHN PHILLIPS STREET, CHEMIST CONNECTICUT AGRICULTURAL EXPERIMENT STATION, NEW HAVEN, CONN.

CANNED fruits do not possess the commercial importance of such canned vegetables as peas, corn, and tomatoes; nevertheless the industry is a most important one, and the output of the product is constantly increasing. As was pointed out in the September number of *THE MODERN HOSPITAL*, most of us prefer the fresh product to even the finest canned fruit or vegetable, yet it must be recognized that at certain seasons of the year fresh fruits are denied to the ordinary purchaser of limited income. Fortunately, in times of abundance the canner is able to pack for our use fruits of excellent quality, and thus aid most materially, not only in the conservation of an important source of human food, but also in supplying to the consumer a high-grade food product at a reasonable cost.

At one time it was considered that fruits of the highest quality should be packed only in glass, and fruits in tin were considered somewhat taboo. The development of the canning industry,

however, has more and more emphasized the value of the tin can as a container, and today we find fruits of the highest quality packed in that manner. It is true that some of the most fancy brands are still packed in glass, but in many instances this "fanciness" consists more in appearance than in any other quality, and the consumer pays a greatly increased price for a product that looks well, but probably is no more nutritious than, and often is inferior in taste and flavor to, its less aristocratic brother packed in tin.

In judging the quality of canned fruits, the following points should be considered: the nature of the fruit employed, the heaviness (density) of the syrup, the presence of foreign substances (such as glucose, saccharin, artificial color, and chemical preservatives), and the truthfulness of the label as to variety of fruit, and the name and location of the packer. Some of these points are possibly of more importance to the inspection official than to the ordinary consumer, but they all have a bearing on the quality of the product and its integrity. At the present time saccharin, artificial color, and

¹This is one in a series of papers by Mr. Street on Foods. In September, Canned Vegetables; next paper, Macaroni, Spaghetti, Vermicelli, and Noodles.

chemical preservatives are seldom used in the ordinary classes of canned fruits. In such a product as maraschino cherries, however, artificial color and preservatives are usually present, and even the maraschino flavor itself is often spurious. Strawberries and raspberries, which lose much of their natural color on cooking, are also sometimes artificially colored. Generally speaking, however, canned fruits are even more free from adulteration in the usual understanding of that term than are canned vegetables, which is high praise indeed.

The greatest variations found in brands of the same kind of canned fruit lie in the quality of the fruit used and the density of the syrup in which the fruit is packed. Generally speaking, the heaviest syrup is used with the best fruit, but good fruit is found packed in syrups of all concentrations, according to the abundance of the fruit and to special commercial demands.

The quality of the fruit used shows great variations. The fruit may be large, firm, free from spots and blemishes of all kinds, or it may consist of small, immature, irregularly shaped pieces, with occasional spots of decay. In the case of peaches, especially those intended for use in pies, we often find the fruit unpeeled, and in some of the cheaper grades of sliced pineapple the eyes are not removed. In judging the quality of canned fruit, just as in the case of the fresh article, too much dependence must not be placed on appearance alone, for, as already stated, often the fruit of finest flavor is not that which appeals most strongly to the eye.

During the past year the writer has made quite an extensive examination of canned apples, apricots, cherries, peaches, pears, pineapple, and plums. The investigation was not concerned so much with the chemical composition of the fruits, which varies greatly according to variety, season, maturity, and other conditions, but rather with the relation of fruit to liquor, the density of the syrup used, the quality of the fruit packed, and the integrity of the net weights claimed on the can labels. In all 303 samples, representing 101 brands, were examined, all of which were packed in tin, except one brand of "fancy" plums packed in glass. The details of this examination cannot be given in this place, but a summary of the writer's findings will show the quality of the canned fruit offered to the American public, and will point out certain matters of interest in connection with the purchase of this class of food.

APPLES

The samples were all packed in No. 3 cans, one brand claiming 29 ounces net weight and all the

others 30 ounces. In only one brand was a weight shortage shown, the net weight in all the cans ranging from 29.5 to 33.7 ounces. The solids, separated by draining the liquor from the fruit, made up from 50 to 71 percent of the total weight. Apparently sugar is not added to canned apples to any great extent, as the liquor contained only from 6.4 to 8.1 percent. The size and quality of the fruit packed showed a wide range; in some brands fine, large fruit, in others small fruit; practically culls, was used. The number of pieces of fruit per can ranged from 11 to 43, two brands containing many small pieces of various shapes and sizes. The cost ranged from 10 to 15 cents per can.

APRICOTS

All but one brand were packed in No. 2½ cans, all but three satisfying their net weight claims of from 30 to 32 ounces; the net weight varied from 29.9 to 33.1 ounces. The drained fruit made up from 52 to 63 percent of the total weight, and the sugar in the liquor ranged from 23.2 to 27.1 percent. The size and quality of the fruit was much more uniform than in the case of apples, although in two brands the skins had not been removed. The number of pieces of fruit ranged from 19 to 23, and the cost from 25 to 28 cents per can.

CHERRIES

Three samples were packed in No. 1 cans, 33 in No. 2, 21 in No. 2½, and 3 in odd-sized cans. The brand in No. 1 cans, although claiming 19 ounces net weight, contained only 11.7, 11.9, and 11.7 ounces, respectively, probably an unintentional shortage arising from using the wrong labels on this particular lot.

The samples in No. 2 cans claimed from 18 to 21 ounces net weight, and showed from 20.7 to 23 ounces, only one sample showing even a slight shortage. The weight of drained fruit ranged from 45 to 72 percent, in six samples amounting to less than 50 percent, although in all of the latter the quality of the fruit was good. The sugar in the liquor ranged from 13.4 to 44.4 percent, and the cost from 15 to 25 cents per can.

The samples in No. 2½ cans contained from 29.7 to 32.9 ounces, 30 ounces being uniformly claimed. The drained solids ranged from 52 to 69 percent, the sugar in the liquor from 7.2 to 28.4 percent, and the cost from 15 to 30 cents per can.

The cherries were not counted, but they ranged from fine large cherries to small, partially rotten fruit. One can was blown and two showed some gas on opening. Three cans of one brand contained several rotten fruits.

PEACHES

No pie peaches were included in the examination. Six samples of sliced peaches in No. 2 cans showed an average net weight of 22.7 ounces. In one brand the fruit made up 73 percent of the contents, while in the other only 58 percent was fruit; likewise the former contained 31.7 percent of sugar and the latter 17.5 percent. The price was somewhat in harmony with the quality—namely, 22 and 15 cents per can, respectively.

The samples of halved fruit were generally packed in No. 2½ cans, claiming from 28 to 31 ounces net weight, and with actual weights from 29.0 to 32.5 ounces. The weight of drained fruit ranged from 54 to 75 percent and the sugar in the liquor from 8.1 to 30.8 percent. The number of pieces of fruit ranged from 6 to 25. The quality of the fruit likewise was quite variable, in some cases the fruit being overripe, in others of poor appearance, but of excellent flavor, while in still others fine appearing fruit was deficient in flavor. The cost ranged from 15 to 25 cents per can.

PEARS

This fruit usually was found packed in No. 2 cans, claiming from 18 to 21 ounces net weight and supplying from 19.8 to 21.9 ounces. The drained solids ranged from 49 to 73 percent, the sugar in the liquor from 10.9 to 21.6 percent, the number of pieces of fruit from 7 to 23, and the cost per can from 8 to 15 cents. The quality of the pears was not always good. In one brand the fruit was hard and immature; in others the pears were mushy, several containing pieces with rotten spots; one can consisted chiefly of small pieces and trimmings, with occasional cores and seeds; one can was blown, two cans had a distinct fishy odor, two cans contained considerable dirt, and one contained numerous raspberry seeds. From a quality standpoint the pears were the least satisfactory of all the fruits examined.

PINEAPPLE

Pineapple was found in three forms—sliced, grated or crushed, and in small cubes. The sliced pineapple was packed in No. 2 and No. 2½ cans. In the No. 2 cans the claimed weight ranged from 18 to 20 ounces, and that found from 20.6 to 22.3 ounces. The drained fruit ranged from 48 to 73 percent, three samples containing less than 55 percent, while all of the others contained over 60 and most of them over 65 percent. The number of slices ranged from 7 to 12, depending chiefly on the size of the fruits. The sugar in the liquor ranged from 19.2 to 30.8 percent and the cost from 15 to 20 cents per can.

In the No. 2½ cans the claimed weight ranged

from 28 to 30 ounces, and that found from 29.6 to 31.9 ounces; the drained fruit from 61 to 65 percent, the number of slices from 8 to 10, the sugar in the liquor from 19.6 to 25.2, and the cost per can from 15 to 25 cents.

The grated or crushed pineapple was packed in No. 2 and No. 3 cans. In the former the net weight ranged from 20.5 to 21.5 ounces, and in the latter from 32.4 to 33.7 ounces. The drained fruit in No. 2 cans ranged from 38 to 52, and in No. 3 cans from 59 to 66 percent. The brand packed in No. 3 cans showed only from 6.0 to 6.9 percent of sugar in the liquor, compared with an average of 23.3 percent in the others, and the eyes had not been removed. The latter fact was plainly stated on the label, and, coupled with the low price of 10 cents per can, indicated that the preparation was not offered as a high-grade product.

PLUMS

Twenty-one samples were packed in No. 2 cans, 12 in No. 2½ cans, and 3 in glass jars equivalent to No. 2 cans. The samples in glass averaged 23 ounces net weight, the drained fruit from 46 to 55 percent, the sugar in the liquor, which was very high, from 23.4 to 33.3 percent, and the number of plums from 19 to 25.

The samples in No. 2 cans claimed net weights from 19 to 22 ounces, and supplied 21.2 to 21.9 ounces. The drained fruit ranged from 41 to 62 percent, four samples containing less than 50 percent. One brand averaged only 42 percent compared with 55 percent in the other brands. The sugar in the liquor ranged from 15 to 20 percent, the number of plums from 16 to 26, and the cost from 10 to 15 cents per can.

In No. 2½ cans the claimed weight ranged from 29 to 30 ounces, and that found from 30.7 to 33.0 ounces; the drained fruit from 43 to 58 percent, the sugar in the liquor from 14.8 to 26.6 percent, the number of plums from 8 to 43, and the cost from 15 to 22 cents. In the three samples of one brand the number of plums found were 20, 25, and 43, the last being very small fruit. Aside from the great variations in size, in some of the brands the fruit was very soft and mushy, and by no means of attractive appearance.

SUMMARY

The above statistical recital, of course, has been prosy enough, but the facts presented should be of value to institutions and individuals who are obliged to purchase canned fruits in quantity. The facts herewith given are in no sense opposed to the high reputation these products enjoy. On the contrary, they show that our canned fruits are generally of high quality and are sold honestly.

CANNED FRUITS

Fruit	Can size	Net weight				Weight of drained fruit		Percent of drained fruit		Percent of sugar in liquor		Number of pieces of fruit		Average weight of pieces of fruit		Cost per can	
		Claimed		Found		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
		Max. oz.	Min. oz.	Max. oz.	Min. oz.												
Apples	3	30	29	33.7	29.5	22.8	17.0	71	50	8.1	6.4	43	11	1.62	0.51	15	10
Apricots	2½	32	30	33.1	29.9	20.0	16.6	63	52	27.1	23.2	23	19	0.53	0.46	28	25
Cherries	2	21	18	23.0	20.7	15.4	9.9	72	45	44.4	13.4	..	..	....	....	25	15
Cherries	2½	30	30	32.9	29.7	21.8	16.6	69	52	28.4	7.2	..	..	....	....	30	15
Peaches	2½	31	28	32.5	29.0	22.4	15.8	75	54	30.8	8.1	25	6	3.07	0.82	25	15
Pears	2	21	18	21.9	19.8	14.9	9.9	73	49	21.6	10.9	23	7	1.71	0.54	15	8
Pears	3	35	32	37.5	33.9	25.6	17.9	69	50	19.4	9.9	28	10	1.79	0.67	15	10
Pineapple, sliced	2	20	18	22.3	20.6	15.2	10.3	73	48	30.9	19.2	12	7	1.86	0.86	20	15
Pineapple, grated	2	20	19	21.5	20.5	11.0	7.9	52	38	25.4	20.7	..	..	....	....	23	20
Plums	2	22	19	21.9	21.2	13.3	8.8	62	41	20.0	15.0	26	16	0.70	0.42	15	10
Plums	2½	30	29	33.0	30.7	18.0	13.3	58	43	26.6	14.8	43	8	1.98	0.39	22	15

Nevertheless the summary given in the appended table shows very clearly that a wide choice exists as regards quality, and that mere cheapness is often a delusion and a snare. The net weights claimed are almost always conservative, and the purchaser, as a rule, obtains more of the product than the packer guarantees. The relation of fruit to liquor, however, will well repay close study. With such variations in percentage of fruit as 45 and 72 for cherries, 54 and 75 for peaches, 49 and 73 for pears, and 48 and 73 for sliced pineapple, it is evident that at times the consumer is called on to purchase excessive amounts of liquor under the supposition that he is receiving the normal amount of fruit. In many instances this liquor contains considerable sugar, but at times it more nearly resembles water than a sugary solution. The density of a syrup doubtless has an influence on the cost of the canned product, and the table shows such wide variations in sugar content as from 7 to 44 for cherries, 8 to 31 for peaches, 10 to 22 for pears, 19 to 31 for pineapple, and 15 to 27 for plums.

Quality likewise is reflected to some extent in the size of the fruit packed. When cans of the same size contain from 11 to 43 pieces of apples, or from 6 to 25 half peaches, or from 7 to 23 pieces of pears, or from 8 to 43 plums, it is apparent that fine, large fruit is not always used, although of course in some cases the smaller fruits may not be deficient in flavor.

Generally speaking, the fruits examined were of a high degree of excellence. While in some cases, notably with pears, inferior fruit was packed, and rather careless packing methods were employed, resulting in an unattractive, and in a few cases a dirty, product, the packers of American fruits are worthy of high commendation for the general excellence of their products. When they realize more fully that the consumer should not be asked to pay a fruit price for water or a dilute sugar syrup, the most carping critic will have little ground of complaint against this class of products, of which the manufacturers may justly be proud.

In an unofficial paper of this character it is obviously improper to go into details concerning specific brands. To the seeker of such information the writer will be pleased to send a copy of his 1915 report on request, in which twenty-seven pages are devoted to this important subject.

STUDY OF CANCER TAKING FORM

National Society Issues Bulletin Telling of Its Activities and the Scope of Its Work

The American Society for the Control of Cancer has prepared tentatively a series of hospital records which, it announces, are now in use in several selected hospitals, with a view to the formulation of a final record series that will furnish data for a further and much needed study of cancer and its occurrence in the individual, the family, and the community.

The society has just issued a new bulletin on the scope of its work. It is stated that the society is now working in close coordination with the following national organizations, with the boards of health, with organizations of social workers, women's clubs, insurance companies, industrial and welfare bureaus, and the public press:

American Dermatological Association, American Surgical Association, American Laryngological Association, American Otological Society, American Association of Genitourinary Surgeons, American Gynecological Society, American Association of Pathologists and Bacteriologists, American Orthopedic Association, American Ophthalmological Society, and the American Neurological Association.

The society announces that it has no purpose to engage in experimental research, does not intend to aid in the support of hospitals or clinics, and will not attempt the treatment of individual cases of cancer. It will issue circulars and bulletins on the subject of cancer, inaugurate and inspire public meetings and lectures, do statistical research, collect clinical histories, and in every way possible lead a propaganda for a better approach to the study of all phases of the subject.

The society's offices are at 25 West Forty-fifth street, New York, and Mr. Curtis E. Lakeman is the executive secretary.

The new Nathan and Miriam Barnert Hospital at Paterson, N. J., reported to have cost in the neighborhood of \$150,000, was opened October 24. Mr. David Schwab, formerly superintendent of the Hebrew Hospital, of Baltimore, has supervised the erection and equipment of the building, and will manage the institution.

THE SMALL COMMUNITY HOSPITAL—THE INTERIOR ARRANGEMENT¹**Most Community Institutions Must Be Planned for Future Expansion—Some Principles of Interior Arrangement Illustrated—Cost Discussed**

By JOHN ALLAN HORNSBY, M. D., CHICAGO

PAPER V

ANNOUNCEMENT was made last month that the next paper in this series would concern the organization of the small hospital. During the month, however, persistent appeal has been made for another article on the architecture of the small hospital, this time including rather the interior arrangement, the last article having been devoted to materials for construction. And it seems that this should be so, because very much space is being wasted in most of the new small hospitals that are going up, and many necessary units or working places are being omitted; so that this month we shall discuss the interior arrangements of the small community hospital, and, in order that the discussion may take on a helpful and, as it were, clinical aspect, we are using as the basis for discussion an ideal plan of a hospital to provide for twenty or perhaps twenty-four patients, and to be the first unit of a building that can be added to from time to time without disturbing its homogeneity or architectural form. We have purposely omitted scales on the drawings for this hospital because we do not agree with Sir Henry Burdett, of London, that hospital plans are useless unless drawn to scale.

There are some pretty definite figures for hospital construction in this country; for instance, our beds are approximately 3 feet wide and 6 feet 6 inches long, and there must be working space between them of at least 3 feet. The head of the bed should stand away from the wall at least 18 inches, and the beds at the ends should leave working space next to the walls. It makes not quite so much difference as to the width of the aisle between the feet of the bed, so that carts and wheel chairs and perhaps two persons abreast can traverse them.

Our serving rooms or diet kitchens, where they are intended to serve one floor or one unit only, should be large enough to contain a small ice box or refrigerator, a cabinet on the wall for dishes, a steam table—say, 2 by 4 feet—a small serving table—say 3 by 4 feet—and a sink, with drain board, and space for a hot plate, either gas or electricity.

Our utility rooms must contain a slop sink, a utensil sterilizer, a wall cabinet for bed pans,

urinals and rubber nursing goods, and a table on which work can be done.

Our bath and toilet rooms must be large enough to contain two toilets, with separate door for each, a lavatory, and a separate compartment for the bath; and such a bath room should be large enough to contain a tub 5½ or 6 feet, set into the walls on three sides, with space enough on the fourth side for the bather to undress and dress. It is always understood that the toilets in these rooms are at the windows because they need ventilation, and the baths toward the corridor because direct, close ventilation is not so necessary.

The dimensions of the operating room are rather elastic, and will depend in large measure on the wishes and technic of the surgeons. Some operators and some hospitals use very little furniture, nearly all the paraphernalia being kept in an adjacent room, leaving the operating room itself entirely bare, except for the table and anesthetizer's stool. In these hospitals a scrub sink is the only other furniture. In other hospitals and for other surgeons a room full of furniture is required—the table, the anesthetizer's stool, revolving solution basins with arm dip, table for instruments, the drum stand, a goose-neck floor lamp, cautery apparatus, a scrub sink, and slop sink. The dimensions of the operating room must be predicated on the wishes of the surgeons in these respects. But it is very highly necessary to have certain auxiliary rooms as a part of the operating department—an anesthetic room, which may be used likewise as a preparation room; there must be a nurses' work room, large enough to hold a good-sized table, or even two tables, and a wall cabinet for supplies. Sometimes the instruments are kept in this room, but it is not an ideal arrangement because there is running hot and cold water in this room, and vapors are likely to settle on the instruments and tarnish the metal. Instruments should be kept dry, and, therefore, it will be better if they are kept in a room without running water and in a case with a good lock, and with glass on three sides and glass shelving.

In thinking about this small hospital, we are looking forward to a time when additions will be required, and it should be possible to so build this first unit that a second and even a third can be added without disturbing any part of what has

¹This is the fifth in a series of six papers on Creating, Organizing, and Managing a Small Community Hospital. Next month the organization will be discussed, administrative and medical.

already been built, and without tearing out any partitions.

In the plan shown, the location of the kitchen in the basement is not ideal in its relations to the dining rooms, which are across the corridor, but provision is made between the nurses' and officers' dining room and the dining room for the help for a service room, to which a portable cart may be wheeled, and from which either or both dining rooms may be served. The arrangement shown makes possible a large refrigerator, with a high ice hole at the top, through which ice may be furnished from the rear of the building.

It will be noted that ventilation is secured through the corridors from end to end of the building, and, when a second and third addition is made, this same through ventilation is easily arranged.

This building faces to the north, and on the second floor, with northern exposure, is shown the operating suite, with one large operating room and with one or two other rooms, called by different names, that can be used for dressings or for emergency operations when more than one surgeon wants to operate at the same time. It will be noted that we have left a sort of circular or octagonal corridor in this operating suite; later on, when it becomes necessary to add a wing at this end of the building, the partitions can be changed at this point and the whole straightened out with very little expense, and thus the corridor continued through into the new wing, and the present operating room can then be taken, if desired, for an obstetrical room and one of the present auxiliary rooms can be turned into a nursery. During the occupancy of this first unit as a complete hospital, some of the rooms about the entrance of the building will be used for patients, and afterward they can be given over to a separate office for the superintendent, a doctor's examination room and the like, or any other administrative use can be made of them that seems desirable.

In order that architects and trustees and superintendents may avail themselves of the principles attempted to be illustrated in these drawings, a somewhat more detailed description of this little building follows:

This hospital will furnish accommodations for two 4-bed wards, two 2-bed wards, and four private rooms, making a total of 16 beds. In case the private rooms are used as 2-bed wards, it would give 4 additional beds, making 20 in all, and the 4-bed wards may take 6 beds, making in that case a hospital of 24 beds.

Assume that the hospital has a fair-sized lot, with a south frontage on a street, this frontage to

be 200 feet wide and 180 feet deep, preferably a corner lot. The lot plan shows a small hospital, 86 feet long and 40 feet wide, located so as to have ample room for future additions and still have plenty of light and air when all the buildings are up. The hospital, as indicated by No. 1, would be placed in the center of the lot and 40 feet from the south lot line. The first addition would be indicated by unit No. 2, placed 10 feet from the west lot line and 20 feet from the south lot line, extending back within 5 feet of the north lot line, with corridor joining that of the present building. The power house would be located in the center at the rear of lot, 5 feet from the north lot line, as indicated by unit No. 3, and connected to the hospital by a tunnel, as shown by unit No. 4. The power house would have the boiler room in the basement and the laundry on the first floor, and could be built whenever desired without any inconvenience to the hospital. The third addition would be indicated by unit No. 5, placed 10 feet from the east lot line and 20 feet from the south lot line, extending back within 5 feet of the north lot line, with connecting corridor to the present building. A part or all of either unit No. 2 or No. 5 could be built at one time, to meet the requirements of the hospital. The permanent operating department should be located in the north end of unit No. 2, so that there would not be any interference with the present operating department when unit No. 5 is built.

The hospital as shown, built of fireproof construction, having concrete foundations, hollow tile walls stuccoed on the exterior, column and floor construction of reinforced concrete, tar and gravel roof, wood door and window frames, wood sash and doors, gypsum partitions, cement floors in basement, linoleum floors on first and second floors, except in the operating department, which would have terrazzo floors, electric wiring, plumbing, heating, dumbwaiter, and elevator, would cost about \$35,000.

The hospital as shown, built practically the same as above, except the floors would be of wood joist construction, partitions of wood studs, with wood lath and plaster, would cost about \$25,000.

Both of these estimates would necessarily depend on the location and local conditions, and therefore are approximate only.

BASEMENT FLOOR

The main kitchen No. 1 is connected directly to the dumbwaiter No. 3, which serves the diet kitchens on the first and second floors. The vegetables and meats would be prepared in room No. 2, so that the main kitchen can be kept as clean as possible. This room is provided with a large

built-in refrigerator as shown by No. 5, which is iced from the outside of the building. Hall No. 4 is provided so that dumbwaiter may be used from the hall side without entering the kitchen. Grade entrance is provided at No. 6. The elevator machine will be placed in a room directly under stair landing No. 7, with entrance through hall No. 8. Ambulance entrance to elevator is shown at No. 10. Morgue No. 14 is entered only through elevator hall No. 12. Soiled clothes closet No. 13 is directly under the clothes chute No. 11 on the first and second floors. Boiler room No. 17 is entered from the

inside of the hospital through hall No. 15, and from the outside by grade entrance No. 16. Fuel room No. 18 is easily accessible to the boiler room and coal may be dropped through a manhole. The x-ray room is provided as shown by No. 19. Help's toilet and locker rooms are shown at Nos. 20 and 21. Drug supply room No. 22 and kitchen stores No. 24 are centrally located and close to the grade entrance. The help's dining room No. 25 and the nurses' dining room No. 27 will be served from the serving room No. 26, which will also contain dishwashing machine, so that the dishes from these din-

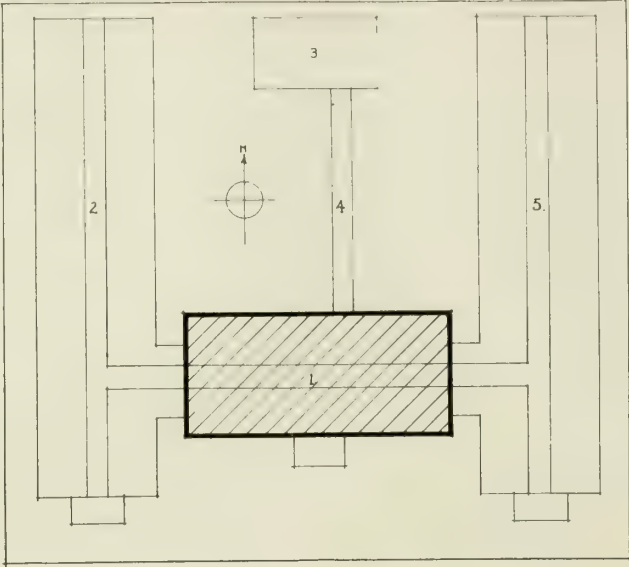


Fig. 1. Lot plan.

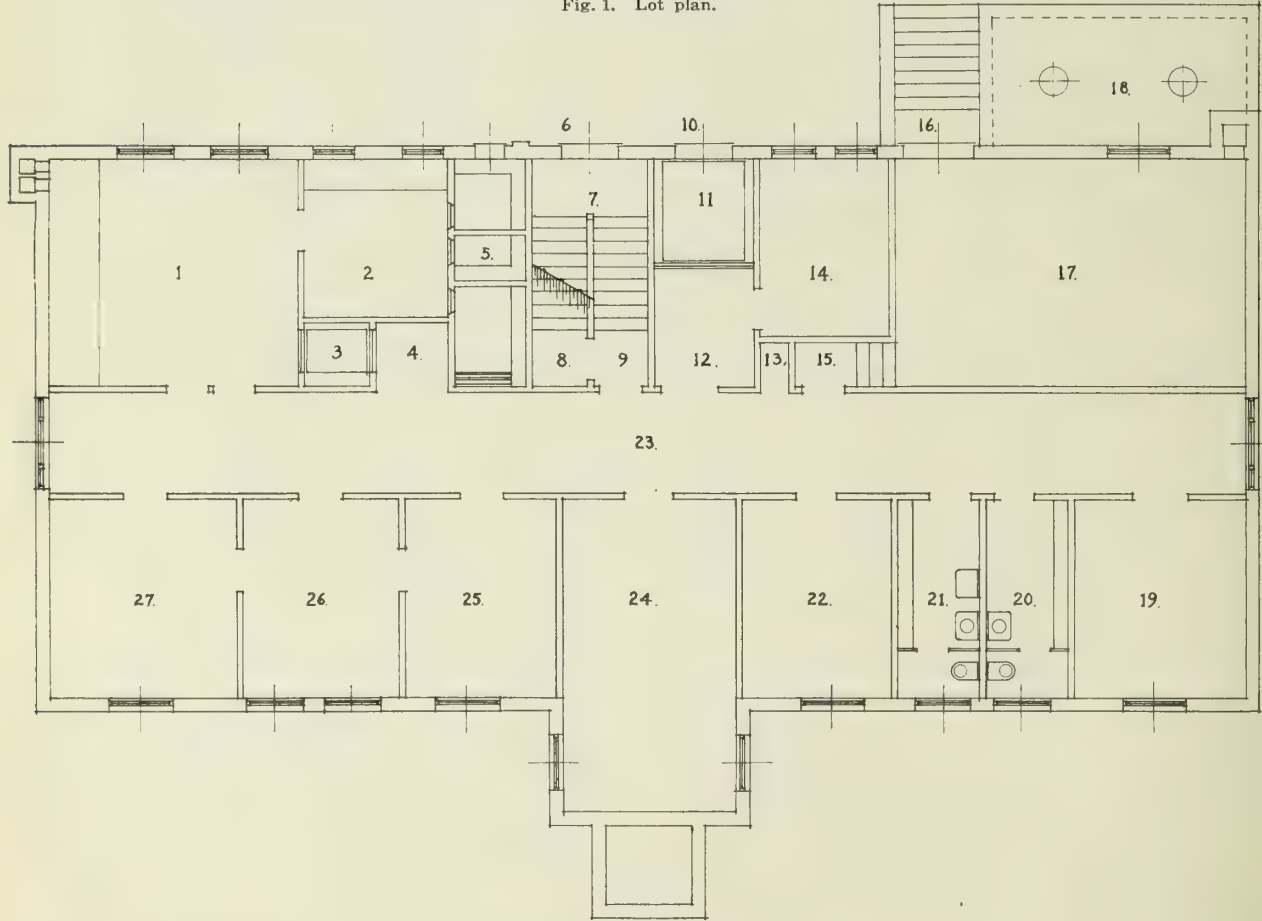


Fig. 2. Basement floor plan.

- | | | | |
|---|-------------------------------------|---|---|
| 1. Main kitchen. | 8. Hall to elevator machine room. | 14. Morgue. | 21. Female help's toilet and locker room. |
| 2. Vegetable and meat preparation room. | 9. Stair hall. | 15. Hall to boiler room. | 22. Drug supply room. |
| 3. Dumbwaiter. | 10. Ambulance entrance to elevator. | 16. Exterior entrance to boiler room. | 23. Corridor. |
| 4. Hall. | 11. Elevator. | 17. Boiler room. | 24. Kitchen stores. |
| 5. Large built-in refrigerator. | 12. Elevator hall. | 18. Coal room. | 25. Help's dining room. |
| 6. Grade entrance. | 13. Clothes chute. | 19. X-ray room. | 26. Serving and dishwashing room. |
| 7. Stair landing. | | 20. Male help's toilet and locker room. | 27. Nurses' dining room. |

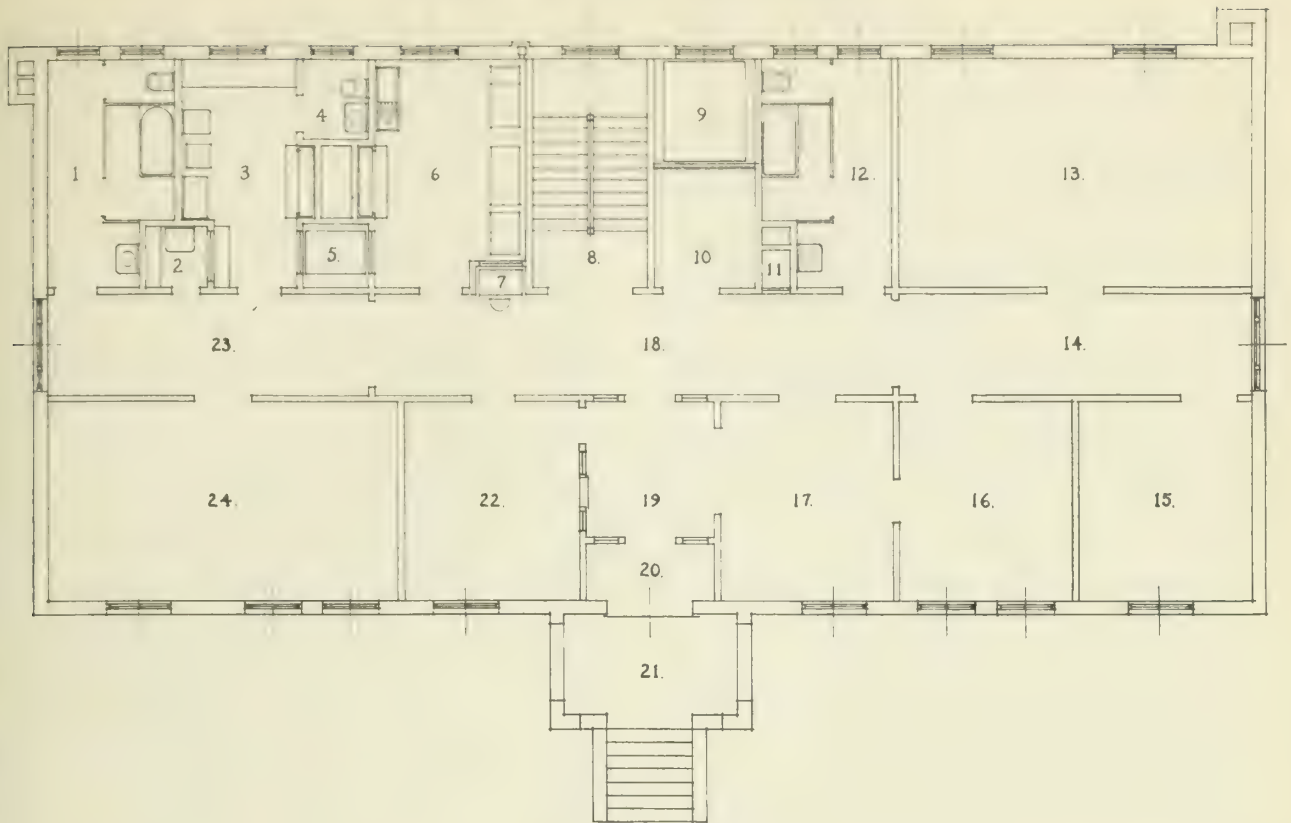


Fig. 3. First floor plan.

- | | | | |
|--------------------------|---------------------------|--------------------------------|----------------------------------|
| 1. Toilet and bath room. | 7. Nurse's station. | 13. 4-bed ward. | 19. Lobby. |
| 2. Porter's room. | 8. Stair hall. | 14. Male patients' department. | 20. Vestibule. |
| 3. Utility room. | 9. Elevator. | 15. 2-bed ward. | 21. Front porch. |
| 4. Nurses' toilet room. | 10. Elevator hall. | 16. 2-bed ward. | 22. Office. |
| 5. Dumbwaiter. | 11. Clothes chute. | 17. Reception room. | 23. Female patients' department. |
| 6. Diet kitchen. | 12. Toilet and bath room. | 18. Corridor. | 24. 4-bed ward. |

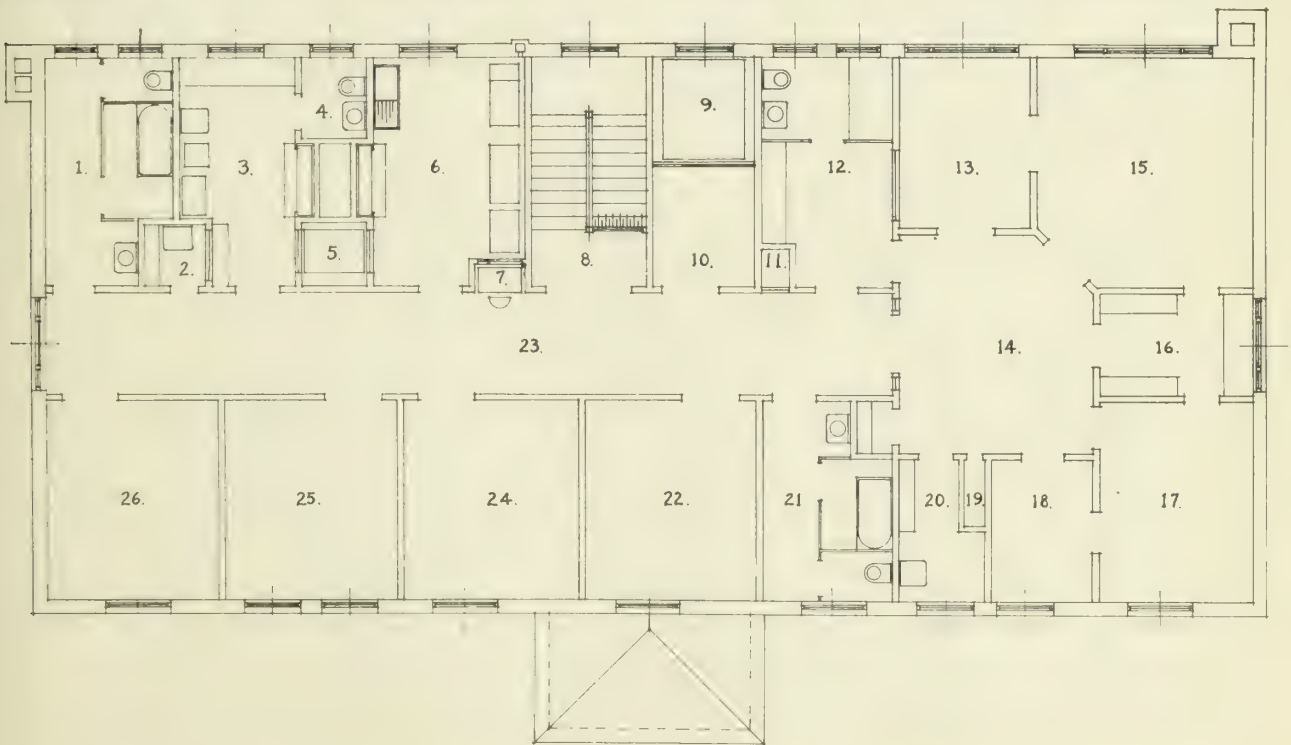


Fig. 4. Second floor plan.

- | | | | |
|--------------------------|---------------------------|---|---------------------------|
| 1. Toilet and bath room. | 8. Stair hall. | 15. Operating room. | 21. Toilet and bath room. |
| 2. Porter's room. | 9. Elevator. | 16. Instrument and sterile supply room. | 22. Private room. |
| 3. Utility room. | 10. Elevator hall. | 17. Sterilizing room. | 23. Corridor. |
| 4. Nurses' toilet. | 11. Clothes chute. | 18. Preparation room. | 24. Private room. |
| 5. Dumbwaiter. | 12. Doctor's wash room. | 19. Blanket drier. | 25. Private room. |
| 6. Diet kitchen. | 13. Anesthetizing room. | 20. Utility room. | 26. Private room. |
| 7. Nurse's station. | 14. Operating department. | | |

ing rooms may be washed and kept outside the main kitchen.

FIRST FLOOR

The male patients' department No. 14 is located in the east end of the building, and the female patients' department No. 23 is in the opposite end, each provided with its respective toilet and bath rooms Nos. 1 and 12. Room No. 2 is provided for the porter, with sufficient room for the brooms, mops, etc. Utility room No. 3 is provided with slop hopper, sterilizer, bed-pan rack, table linen and medicine case, and a door to dumbwaiter No. 5. The nurses' toilet room No. 4 is entered only through utility room. Diet kitchen No. 6 is equipped with a sink, steam table, refrigerator, and a table, with a door to the dumbwaiter No. 5. Nurse's station No. 7 is centrally located, so as to give good control with nurse's signal light on wall directly over her desk, which sets into a wall recess, so that only the nurse's chair projects into the hall. A door is provided in the partition between the reception room No. 17 and the 2-bed ward No. 16, so that room No. 16 may be used as a doctor's examination room later, with access to reception room through this door. The 4-bed ward No. 24 could be divided into 2-bed wards, same as shown in Nos. 15 and 16, so that these rooms may be available for offices later without any alterations.

SECOND FLOOR

The four private rooms are shown by Nos. 22, 24, 25, and 26, and have been provided with male

and female patients' toilet and bath room Nos. 1 and 21. Rooms Nos. 2, 3, 4, 6, and 7 are the same as described for the first floor. Doctor's wash room No. 12 is provided with a window so that the surgeon may view a patient being anesthetized in room No. 13 while he is preparing for the operation. Corridor No. 14 gives easy access to all rooms in the operating department. Operating room No. 15 is directly connected to the anesthetizing room No. 13, corridor No. 14, and instrument and sterile supply room No. 16. Sterilizing room No. 17 is connected to the instrument and sterile supply room No. 16 and preparation room No. 18. Blanket drier is provided at No. 19. Utility room No. 20 is so equipped that the entire operating department can be kept clean without leaving this department. When the permanent operating department has been installed in the north end of unit No. 2, this department may be readily changed into an obstetrical department.

It will be noted that the power plant for the first unit is included. The power and heat machinery may be of such character that they may be moved to separate power plant when such is needed by the expansion. The space now to be used for power plant can later on be used for such other purposes as may seem desirable.

It will be noted also that no arrangement is made for laundry, and that the first provision for this will come with the building of a permanent power plant. In the meantime the large room under the stairs can be used for a laundry if necessary.

THE HOSPITAL OR FIFTH YEAR

Some Definite Standards Are Being Tried Out in New York—Medical Schools to Control Hospitals That Are "Satisfactory"

BY E. H. LEWINSKI-CORWIN, M. D., NEW YORK

OVER a year ago the attention of the Public Health Committee of the New York Academy of Medicine was called by the Department of Health of this city to the need of amending the laws of the state in such a way as to afford protection to the public from incompetent physicians. It was suggested that legislation, similar in principle to that of Pennsylvania, Rhode Island, and New Jersey, should be enacted, demanding at least a year of hospital experience from all candidates for medical licensure. Before attempting to advise legislation of this sort, the committee endeavored to ascertain how many prospective physicians failed to secure such experience before entering into practice, and also what would be the attitude of the medical schools of the state toward such an amendment to the law.

From the statistics available it was ascertained that a large proportion of medical students of New York state secure hospital positions immediately after graduation. It was also ascertained that those who do not receive hospital appointments do not fail to do so because of any lack of hospital accommodations in this state, but because of the character of the applicants or on account of their economic status, which prevents them from delaying their entrance into practice any longer than they are legally obliged to do.

The attitude of the schools was unanimously favorable toward the principle of requiring a minimum of a year of hospital experience of an educational character, but numerous difficulties were pointed out in the realization of such a plan. The foremost difficulty is the lack of standardiza-

tion of hospitals; a second is the relation of the school to the hospital. A year's hospital experience may mean much or little; the pivotal point being efficiency in the organization of the hospital. Then, many medical schools have no control over hospitals, and they are loath to have their students pursue so important a part of their medical education outside of the control of the faculty. It is feared that in some instances students would work under the guidance of men not properly qualified to teach. Some of the schools feel that, should a fifth year be added, it should not be given over entirely to clinical work, but that the curriculum of the school should be recast and the clinical work distributed over two or three years, and that in a part of the fifth year certain theoretical studies be pursued. It was also pointed out that many students do not intend to practice, but prepare to take up laboratory work, and that they should not be compelled to take a year of clinical work in the hospital.

Realizing that many of these objections were valid, the committee, after conferences with the deans of some of the medical schools and the assistant commissioner of the State Department of Education, proposed a simple amendment, which retained the essential principle, but which was so worded as to allow sufficient elasticity to meet the various plans which the medical schools might wish to adopt. The proposal provided that, in addition to meeting existing requirements, an applicant for a license may apply for it only after completing twelve months of satisfactory clinical work in a hospital having a daily average of not less than thirty patients, and having not less than fifty beds devoted to the treatment of medical and surgical diseases, and registered by the regents as maintaining at the time satisfactory clinical and laboratory standards.

The proposal made in no way affects the granting of the medical degree; the twelve months of clinical work may or may not be included in the college curriculum, according to the judgment and desire of college authorities; the student will be free, if he chooses, to do a large part of the required clinical work during his second and third college vacations, and therefore the entry of the student into practice need not be long deferred. Under the law as proposed a college may or may not add a fifth year to its curriculum, but, at all events, the public will be protected by the requirement that each applicant for a license shall spend at least twelve months in clinical work before coming up for examination. Those who do not intend to practice medicine need not, of course, take the examination for licensure, but, if they should at any future time decide to take up the

practice of medicine, they will be compelled to meet this requirement of a year of clinical experience. This requirement will, of course, be applicable to graduates of schools in other states, and the law, therefore, will not impose a handicap on the medical colleges of New York to the advantage of competing schools elsewhere.

The committee avoided any attempt to define "satisfactory" hospital standards, believing it wise to permit the regents to feel their way in this new field, guided by the authorities of the medical schools. The proposal that the hospitals in which clinical work is done shall maintain "satisfactory" clinical and laboratory standards corresponds to that part of the present law which declares that the professional requirement shall include four "satisfactory" courses in medical schools maintaining "satisfactory" standards.

One of the medical schools in this state has objected to this proposed amendment on the ground that it compels the applicant for a license to keep fresh in his mind for another year the information necessary to pass the present style of examination, an objection which should hardly be seriously entertained. A well-trained medical graduate should be able to retain for more than one year the knowledge acquired in medical school. In this respect the college referred to stands alone; all the others have indorsed the recommendation fully, and some went so far as to advocate even more rigid requirements. It is probable that legislation along the lines suggested by the committee and indorsed by the great majority of schools in this state will be enacted into law in the near future.

GREAT FUND TO PENNSYLVANIA HOSPITAL

Trustees Wisely Decide to Give Anna Jeanes Bequest of Three Millions for Special Department

The recommendation that a fund of more than \$3,000,000 for the treatment of "cancerous, nervous, and disabling ailments" be given to the University of Pennsylvania Hospital, Philadelphia, is made by Dr. Winford Smith, superintendent of Johns Hopkins Hospital, Baltimore, who was engaged by the trustees of the fund, which is the estate of the late Anna J. Jeanes, to make a survey with the view of determining the best way in which the money can be used for the purpose stipulated in the will. The Jeanes bequest became available in 1908, and the trustees have considered the establishment of a hospital, but it was finally decided that an additional hospital is unnecessary and that the bequest can doubtless be used to better advantage by one of the existing institutions of the city.

The Homestake Mining Company, of Lead, South Dakota, has just set aside \$50,000 for the erection of a hospital to take care of their employees and families. Construction work will be commenced as soon as plans can be completed.



The MODERN HOSPITAL

Editorial Office . . . 6 North Michigan Ave., Chicago
Business Office . . . Metropolitan Building, St. Louis

EDITORS.

Henry M. Hurd Fidelity Building, Baltimore
Frederic A. Washburn . . Mass. General Hospital, Boston
Winford H. Smith . . . Johns Hopkins Hospital, Baltimore
S. S. Goldwater Mt. Sinai Hospital, New York
W. L. Babcock Grace Hospital, Detroit
John A. Hornsby . . . 6 North Michigan Ave., Chicago

SUBSCRIPTION.

Under domestic postage, \$3.00; foreign postage, \$3.50 (14 Shillings). Single copies 35 cents.

Domestic rates include United States, Cuba, Mexico, Porto Rico, Canal Zone, Hawaii and Philippines.

Contributors, subscribers, and readers will find important information on advertising page 34.

The Philadelphia Meeting

The Philadelphia meeting of the American Hospital Association, just closed, was not only the largest and most enthusiastic meeting the association has ever had; it was very much more than that. It departed in some radical directions from precedents of former days, and by specific action placed itself on a new and higher plane, and without any doubt the work of the association henceforth is to be constructively helpful to the hospitals throughout the world. One of the primary acts that make this result certain was the creation, by constitutional amendment, of a permanent secretaryship, with an all-time paid officer and with permanent headquarters and an operating staff. Part of the money for this new departure came, of course, from the earnings of the commercial exhibit, but it is understood that, because of the enthusiasm and the large attendance at Philadelphia, some people with means have determined to help the association with considerable sums, and it is believed that from now on the association will not lack money to put into effect some of the constructive work that has long been discussed and eagerly and anxiously hoped for.

Another very important action taken by the Philadelphia meeting was the creation of a board of trustees who shall not change from year to

year, as the executive committee has done heretofore, and whose appointment will not be made by the president of the association, who likewise changes from year to year, but who will be elected, one new member each year. It was a very wise provision that made the president and treasurer of the association members of the board of trustees, and provided for the election of one of the three trustees annually. This plan will make it possible—though hardly probable, except under great emergency and possible provocation—for the association to take the executive management out of the hands of any board at any regular annual meeting and to place it under a new personnel, and with any new policies that the association may wish to have carried out. Moreover, the personnel of the first board of trustees is ideal with which to begin an entirely new form of administration of the association. Mr. Borden is a business man of long experience and large interests, and he is a lawyer of standing; Dr. Winford Smith is, of course, one of the best hospital administrators in the country and handles large affairs, and he knows the association, its needs, and its ideals as well as any other man in the country; and Miss Keith is a successful administrator, a woman of excellent judgment and hard common sense. This board will guide the association with a steady hand, and, while the members may be expected to be extremely conservative, yet they are certain to be progressive and to initiate some, if not all, of the constructive policies that the association has been thinking about for years back.

The new bureau of information for which provision was made under a resolution, in pursuance of the report made by Dr. Ross on the development of the association, should be a most helpful agency. There has been a standing committee to try to solve this problem for several years, made up of such men as Dr. Howell and Mr. Clover. They attempted to get the public health service of the Government to inaugurate such a bureau, but Congress refused to allow that service to act; then they attempted to secure the funds and the initiation from one of the large foundations, and that plan, too, failed. Now the association is to do the work itself through its own agencies and under the direction of its own trustees, a most fortunate solution.

We may expect something tangible from the action of the association in providing for a committee to cooperate with the American College of Surgeons and other organizations in securing some sort of standardization of hospitals. There has been a committee on standardization for sev-

eral years, made up of Dr. Hurd, Dr. Washburn, and Dr. Hornsby. This committee advisedly has confined its activities to a general helpfulness along educational lines; that educational work has gone well forward, and some pretty definite plans have been established along which the new composite committee will find it a little easier to travel. The recent formation of the Catholic Hospital Association will very greatly help in this direction. This great group of institutions was not at the outset kindly disposed toward the general principle of standardization. They objected to any attempt on the part of an outside committee to invade their privacy; hence it seemed desirable that an association should be formed among themselves, and there seems to be hardly a question that the able president of this association, Rev. Chas. B. Moulinier, will take an enthusiastic part in the work of Dr. Bowman's committee.

Another innovation that will probably be initiated by the new secretary will be a bureau of employment, through whose agency efficient hospital workers may find proper positions and through which hospitals needing trained workers may find them.

Altogether, the Philadelphia meeting of the association was most auspicious, and bodes a new era for the hospital activities of this country.

The Small Hospitals—At Philadelphia

Not very much has been said in aftermath about the two symposiums on small hospitals at the Philadelphia meeting. The secretary has not even included these two sessions in her minutes of the meeting.

But these two sessions conducted by Miss Jordan, one of the vice-presidents of the association, are destined to mean very much to the small hospitals of this country, and there were two topics discussed in them about which we shall hear very much more and out of the discussion of which are to come perhaps some very radical changes in administration.

Up to the present time, administrators of small hospitals have been chosen by trustees without any measuring rule whatever. Sometimes a lay woman who has been made superintendent of a small hospital because she was the widow of some good doctor or some good clergyman, who had kept a neat home and had shown thrift and enterprise in her small sphere—and who needed the salary; sometimes the superintendent was chosen because of his or her enthusiasm and devotion to the cause of the sick—and wholly without any other qualifications. Sometimes a good nurse

was supposed by a board of trustees to be qualified for the executive position solely because she was a good nurse, and perhaps without any executive ability whatever, and without knowledge of the executive business of a hospital.

This same thing must go on for a few years perhaps, but at Philadelphia the initiative was taken in the symposium on small hospitals that must lead eventually to an organized movement for the training of executives for small institutions. Miss Goodrich, of Teachers' College, Columbia University, sounded the keynote along this line in her paper. Teachers' College has generally been understood in the hospital world as a place in which only college-bred and college-trained and high intellectuals might hope to enter. Miss Goodrich tells us that that is not true, and tells us in such terms that the writer of this editorial felt constrained to visit Miss Nutting and Miss Goodrich after the Philadelphia meeting had ended, and he found there a vastly different state of things. He found an inspiration for educated, cultured women, but he found also a place to which any hospital superintendent might go, and while there live in an atmosphere inspiring and helpful, especially to those who had been deprived of early opportunities for foundation education. He was told that hospital superintendents would be made welcome, no matter how serious their want of early training was, that they could remain as long or as short a time as they could afford to spend, and, while there, obtain work befitting their positions and especially befitting their educational studies.

Dr. Babcock, at Grace Hospital, Detroit, is already giving a course in the training of hospital executives. Of course, only a few can be accepted at one time, and thus the opportunities are extremely limited, but Dr. Babcock has turned out some exceptionally able executives for small institutions, and it is almost possible today to pick out Dr. Babcock's graduates by merely going into and looking over a hospital and talking with the superintendent.

The point that we make is this—that there is at present limited opportunity for superintendents in small hospitals, no matter how limited their education has been, to vastly improve themselves; and a great many of them had better be thinking about this, because, as time goes on, another class of women is growing up, women of sound fundamental education, who, after their preliminary scholarship is over, are taking up regularly long prescribed courses in hospital management. Most of these women are already trained nurses, and these women are to be the admin-

istrators of the hospitals of 100 beds and less of the future. Whether one of them shall step into your place or my place today or tomorrow is largely a matter for ourselves to determine. If we go along from day to day, satisfied with what the day brings forth, and without any effort to improve our efficiency, our places are likely to be filled tomorrow, or next week, or next year; if we take advantage of the opportunities to qualify for our work, we may be able to hold our own with these well-trained, well-educated women. This is a warning that the superintendents of small hospitals had better take to themselves.

Figures for Standardization

While we have all been thinking about elevating standards in our hospitals, we have been almost in the attitude of Atlas, the fabled giant, who, if he had had a fulcrum, might lift the world. It seems we have wanted a fulcrum; we have wanted a basis on which to found some standards. Many of us have been thinking of a unified system of accounting for large and small and special hospitals as the best nucleus around which standardization might be achieved. Dr. Warner's paper on accounting, read at Philadelphia, with his resolution for the appointment of a committee to study this intricate subject, seems to have focused this problem somewhat and given it definite form.

Dr. Warner, in common with many of us, feels that, if we could all operate under a unified accounting and bookkeeping system, we would have a basis for comparisons, one hospital with another; we would have some idea of exact expenditures in our hospitals and the items that might be well covered in accounting for these expenditures, and in that way we could measure our service to the sick, not wholly perhaps, but in a very great measure. For instance, if it were known precisely how much money a given hospital was spending for its pathological work, there would be a basis for determining the probable amount of pathological service that institution was giving to its sick, and the mere having of these figures of expenditure would carry with it the necessity on the part of the hospital to go into details, in its annual reports, as to precisely what that pathological department was doing and under what conditions. The same would be true of all departments in the hospital.

It is inconceivable what such information could be made to mean to hospital trustees. Nowadays trustees, administrators, and bookkeepers are able to deceive themselves concerning the activi-

ties of their institutions because there are no guides by which definite service may be measured. Trustees, as a rule, are not very accurate thinkers when it comes to the affairs of their hospitals; they take many things for granted, and a clean house and prettily draped windows are oftentimes accepted by them as evidences of a well-managed hospital, and there are no cold facts facing them to awaken them from delusion. An accurate accounting system will come nearer to doing this than any other half-dozen things that might be suggested. Per capita cost means absolutely nothing to us today; it tells only one side of the story—viz., expenditure—and it tells even only one side of the story of expenditure because it takes into no account the personal equation, the efficiency of hospital employees.

Before this new committee goes very far, it will find itself under the necessity to measure service in hospitals and to interpret this service into dollars and cents, and this seems not an impossible thing to do.

Work for Child Welfare

In another column of this issue will be found a news note about a meeting recently held in Chicago to talk about and, if possible, to initiate a program for more effective child welfare work throughout the country.

This meeting may well usher in an entirely new epoch concerning child welfare. At the present time there are probably fifty organizations of national scope, all or a part of whose work concerns children, and nearly every city and many large towns have organizations working independently to the same end. Many of these agencies are doing splendid work, all of them are spending a great deal of money and energy, and the aggregate of both must foot up a tremendous sum.

The questions are: How much of this work is overlapping? How much work is wisely planned? How much of it is getting actual, tangible results? And last, how much really necessary work for children is being left untouched or ineffectively performed.

There is no doubt that Miss Lathrop struck the keynote of the whole thing when she insisted at the meeting that, to do child welfare work effectively, the work must commence with the mother and on her behalf, and Miss Lathrop also put her finger on a very much neglected item in child welfare work when she demanded recognition for children in rural communities and in small towns.

Many of us are too much inclined to think that the slums and tenements of the great cities are

the only places in which children are neglected, but those of us who are in touch with farm life and with small towns know perfectly well that rural children are not only neglected by their parents and allowed to just grow up like Topsy, without any attention being paid to the items in their development such as skin, teeth, eyes, and ears, but that our boasted ambitions in regard to universal education are woefully ignored in many rural communities. There are many hundreds of thousands of children on the farms who have the merest smattering of an education, some of them not even sufficient to whet their appetites for more.

If the ambitions of the Council on Health and Public Instruction are to eventuate in an incisive program for child welfare, such a program will take us also into the juvenile courts and correctional institutions. Indeed, the subject is so vast and so much in its infancy at the present time that the Council's activities cannot fail to call attention to some glaring faults of commission as well as omission, and much good must come out of it.

HINTS ABOUT BUYING MOTOR AMBULANCES

Touring Car or Limousine Chassis Not Suitable For Ambulance Bodies—The Ethics of Buying

These days we hear a great deal about hospital efficiency in regard to accounting and the purchasing of various supplies, and we are drawing on manufacturers of hospital commodities to help us in directions in which they are experts. The hospital ambulance is one of these commodities, and one about which the average hospital superintendent is not expected to know very much.

There is a tendency just now for hospitals to change from horse-drawn to motor-driven ambulances, and, as this question comes up before the board for consideration, the first inquiry is about the price. It usually happens that some member of the board has a very good touring car or limousine that he would like to exchange for a new one, and when the subject of ambulances is talked of he immediately considers how he can save the hospital some money and at the same time make a sale of the automobile with which he is thinking about parting. This matter is no sooner mentioned in the board than some other member realizes that he is in about the same position. This causes a division of opinion as to the merits of each chassis, and, as usual, each owner feels that his chassis is the best, and that the board will be very unwise to do anything but buy his chassis. He will offer it at a price that, on the face of it, seems attractive.

No consideration has been given to the fitness of the chassis for the service, as each member of the board seems to take it for granted that any large touring or limousine chassis would fill the bill. This is a serious error. Pleasure cars, as a rule, are not meant to be used under ambulances or under any body that has considerable length. They are not suitable, as nearly all pleasure cars have a raised frame in the back over the rear axle, which makes it necessary for a heavy subsill work to overcome the raise.

This elevates the ambulance body higher than it should be. Then, again, they are usually six- or eight-cylinder cars, which gives them a long wheel base, but this excessive wheel base is made possible by the front axle being out so far in front. While the chassis may have a long wheel base, it may be very short back of the driver's seat. We all know, at a glance, that the rear seat in a large touring car or limousine is directly over the rear axle.

An ambulance must be not less than 6 feet 5 inches or 6 feet 6 inches back of the driver's seat, and, if the rear axle is only 39 inches or possibly 42 inches back of this point, it means that the axle is located almost exactly in the center of the space used for carrying a recumbent patient. This means that every jar of the rear wheel strikes the patient in the middle of the back, and makes the riding almost unendurable. We talk a great deal about first aid to the injured, and then deliberately place a patient in a vehicle of this kind and drive him for miles to a hospital for attention, while the jar and the jolting are almost enough to distract him. In some cases this jolting may mean even death, whereas, if a suitable vehicle had been provided, the removal of the patient could have been made comfortable and almost pleasant.

One will see by these few facts that any hospital board that settles this question by substituting a makeshift is making a serious mistake. There is not much money saved, because by the time the chassis is rebuilt and put in good condition (never, of course, as good as a new chassis), the price will amount to as much as, or within two or three hundred dollars of, the cost of a suitable chassis for this service.

The first consideration should be the best chassis to give a long length back of the seat. You will not find this in the touring cars, but must go to the truck department, where you can find any number of three-quarter-ton chassis that have long wheel bases properly arranged to accommodate a body in which a patient will be entirely, or nearly so, in front of the rear axle. These trucks are supplied with pneumatic tires, and can run at a speed that is entirely satisfactory. Supposing one were to use a chassis of this kind costing \$1,000 to \$1,500, and place a body upon it that would cost from \$600 to \$1,000, having incorporated in the body all the equipment necessary for the service required, would not a hospital be serving itself much better?

There is still another feature. The local carriage builder is often taken into the confidence of the board. He may never have built an ambulance, and knows nothing about the requirements, yet local pride and a desire to benefit someone in the locality is the factor that settles the matter, and the order is placed with someone who, while he may be a good carriage builder, knows absolutely nothing about ambulances. It would be better for some first-class firm that has a reputation for building ambulances to be called in and the matter taken up with it. The board would then get the best there is to be had for the service required, and would save money in the end.

It is usually best for any board of trustees not to make purchases among themselves for a public charity in which they may be interested.

Architects Glass & Butner, Fresno, Cal., are working on plans for a 100-bed fireproof addition to the Fresno County Hospital. The building will contain administration offices and four large wards, each ward being a complete unit, with diet kitchen, nurses' room, bath room, etc. A feature of the structure will be the elimination of angles, including the omission of window casements. Ramps will be substituted for stairways.

PHILADELPHIA CONVENTION SURPASSES ALL PREVIOUS MEETINGS

Two of the Largest Hotels Taxed Beyond Capacity—More Than Twelve Hundred People in Attendance—Social Program a Brilliant Success—Commercial Exhibit Sets Precedent

With the great banquet hall on the roof of the Bellevue-Stratford Hotel packed to its capacity of 800 people, with the corridors in the rear of this banquet hall thronged with a milling crowd, and with the office floor of the hotel packed with people unable to find entrance to the meeting, President Winford Smith called the American Hospital Association to order at 10:30 o'clock on the morning of September 26. There were approximately 1,200 people in the hotel to attend the meeting. More than 600 of these were members of the association, many others joined later on during the meeting, and the others were wives and traveling friends of members.

The Philadelphia meeting by all odds not only the largest in attendance that the association has ever had, but it was one of the most enthusiastic meetings that any association ever had. There were members from nearly every corner of this country—Dr. McEachern, from Vancouver General Hospital, Vancouver, B. C.; Dr. Sinclair, from the Winnipeg General Hospital; Dr. Clarke, from the Toronto General Hospital; Mr. J. H. S. Parke and Mr. H. E. Webster, from Montreal; Mr. A. B. Tipping, of Touro Infirmary, New Orleans; Dr. F. K. Camp, from Oklahoma; Dr. Dorr, from San Francisco; and even Great Britain was represented in the person of Sir Henry Burdett, editor of *The Hospital*, and one of the famous hospital authorities for the past twenty years.

The local committee of arrangements had done their part wonderfully well, and the association will probably never meet in so well-arranged a building again. The roof garden of the Bellevue-Stratford, occupying a space nearly 200 feet square, was rented by the committee for the full four days of the meeting. In the great banquet hall the general meetings were held, and in a smaller hall at one side were the section meetings and such improvised gatherings as the occasion developed. All the rest of the roof garden was occupied by the commercial exhibit. Unfortunately, those who attended the meeting had not taken the wise precaution, as a rule, to engage accommodations at the Bellevue-Stratford beforehand, and on Monday evening

and Tuesday morning many hundreds of people flocked to the hotel, expecting to be given accommodations at once. With every thought for the comfort of visitors to the convention, the management of the Bellevue-Stratford, certain that that hotel would not be able to accommodate the crowd gathering, arranged with the Ritz-Carlton, just across the street, to take the overflow, and eventually both these magnificent hostelrys were filled to their utmost capacity, and many visitors were compelled to look for lodging elsewhere. Moreover, the dining rooms both of the Bellevue-Stratford and the Ritz-Carlton were taxed to more than their capacity, and there was some complaint about the seating, especially at the evening dinner.

A precedent was set at Philadelphia in that very many of the women members of the association and some of the men wore full dress in the evenings, and the dinner was usually made a gala affair. One could have no idea that our hard-working women hospital superintendents, whose minds are filled to overflowing all the year with their arduous work, could put it all aside so easily and assume the dress and air and habits of society butterflies; but this is precisely what was done. Some of our women are brilliant and charming, and in their beautiful evening gowns made the hotel look like a rendezvous for the "400" on some very august occasion.

It transpired that it was a wise thought on the part of the San Francisco meeting last year to demand a social program for Philadelphia. The women

appreciated it highly, and the men did everything in their power to give pleasure to the gentler sex. Those members of the association who had failed to attend the meeting missed something out of their lives, because the four days in Philadelphia were literally brimmed full of a kaleidoscopic program of intellectual feasting and social entertainment.

There were four chief social events—the theater party at Keith's on Wednesday evening, the luncheon and reception at the Pennsylvania Hospital on Thursday noon, the automobile drive about the wonderful city during the afternoon of the same day, and simultaneously the boat

OFFICERS OF THE AMERICAN HOSPITAL
ASSOCIATION FOR 1916-1917

PRESIDENT,
DR. ROBERT J. WILSON,
Superintendent New York Hospitals,
New York City.

FIRST VICE-PRESIDENT,
DR. A. R. WARNER,
Superintendent Lakeside Hospital,
Cleveland, Ohio.

SECOND VICE-PRESIDENT
DR. D. L. RICHARDSON,
Superintendent Providence City Hospital,
Providence, R. I.

THIRD VICE-PRESIDENT,
MISS GEORGIA M. NEVINS,
Superintendent Garfield Memorial Hospital,
Washington, D. C.

SECRETARY,
DR. WILLIAM H. WALSH,
Philadelphia, Pa.

TREASURER,
MR. ASA BACON,
Superintendent Presbyterian Hospital,
Chicago, Ill.

TRUSTEES,
MR. RICHARD P. BORDEN,
(Three years)
Trustee Union Hospital,
Fall River, Mass.

DR. WINFORD H. SMITH,
(Two years)
Superintendent Johns Hop-
kins Hospital,
Baltimore, Md.

MISS MARY L. KEITH,
(One year)
Superintendent Rochester
General Hospital,
Rochester, N. Y.

ride on the famous old Delaware River. It seemed that, while the city was filled to overflowing with convention visitors, nothing seemed overcrowded. There was plenty of room for everybody; it had all been so wonderfully arranged.

Philadelphia knows how to entertain visitors. In his brilliant, humorous, and witty address of welcome to the convention on behalf of the mayor, Mr. Edward James Cattell, statistician for the city, had, for the first time in the recollection of many of those who heard him, adorned dry statistics so that many times during his speech they drew round after round of applause as he related one after another industrial activity in which Philadelphia excelled. But this would have meant little to the visitors had it not been for the drives and boat rides and the side trips that were made, during which the wonders of Philadelphia were shown off to their best advantage, and then many of those who heard Mr. Cattell's address were sure that he had understated the case.

Referring again to Mr. Cattell's address of welcome, the mayor could not be present, probably because he had the wisdom to know that Mr. Cattell could make a better appearance and a better welcoming speech than his honor himself. It was a most auspicious opening of the convention—the delicious wit and humor interspersed here and there with facts, not only about Philadelphia, but about the hospitals of this country and their importance and the wonderful work they are doing. Many of us wondered that a layman, supposed to have been entirely unfamiliar with facts about hospital growth and the value of hospitals as health agencies and social centers, could state so many interesting facts.

To a small extent previous meetings of the association have had for one of their most attractive features the little group gatherings—sometimes for breakfast in the grill room, sometimes for luncheon in the middle of the day, sometimes for the more formal dinner in the evening, and again in the grill rooms and dining rooms far into the night. At Philadelphia this practice was unprecedented; there were literally dozens of these groups, made up usually of both men and women members of the association and their families, and friendships of long standing were renewed and many new friends were made, friendships that will endure and that will result in greater co-operation between hospitals and between the administrators of hospitals. Nearly always in these group meetings there was "shop talk;" many personal problems were brought up that could not be discussed at the more formal sessions of the association; helpful ideas were exchanged, and oftentimes solutions were found for problems that

had been extremely difficult. These group meetings should grow in number, in importance, and grow greatly in their results.

THE COMMERCIAL EXHIBIT

Heretofore the association has had, spasmodically, small informal commercial exhibits, not recognized by the association and generally managed by some special local committee independent of the association, or sometimes the hotel at which the association has had its headquarters has provided accommodation, accepted rent money for space, and managed the commercial exhibit. Sometimes the arrangements were even more informal than that, and exhibitors merely stopped at the hotel and exhibited their wares just as a traveling salesman opens up his packages in one of the hotel parlors.

This year, for the first time, there was a formal commercial exhibit, solicited by a definite committee appointed by the president of the association, and held under the auspices of and according to regulations prescribed by the association. It was one of the most valuable features at Philadelphia. There were approximately sixty exhibitors, and very many new things in hospital practice were shown and demonstrated, and the exhibit thus became an educational feature of the association, of perhaps even greater importance and value than the meetings themselves.

The association is now definitely committed to the annual commercial exhibit, and undoubtedly the trustees provided for under the new constitution, adopted at Philadelphia, will have charge, through the permanent secretary, also provided for, of the gathering together and the installation of this exhibit. It will be necessary, of course, that the trustees

WHAT THE PHILADELPHIA CONVENTION ACCOMPLISHED

Created a permanent board of trustees to administer the association's business affairs.

Created a permanent secretaryship with an all-time, salaried officer.

Initiated an annual commercial exhibit as one of the instructive features of the association; also a source of income that will provide funds with which to do the association's obvious work.

Took a long step forward in appointing a committee to study hospital accounting and bookkeeping, and to bring in a system that may be made uniform for all hospitals.

Voted to conduct the meetings by sections, so that special hospitals may group their studies and topics for discussion.

Appointed a committee to work with the American College of Surgeons and other organizations in a study of the problems of standardization, in the hope that some acceptable solution may be eventually worked out.

be responsible for every phase of the commercial exhibit, else it would not be possible to select those things for exhibition that the association should countenance and reject those things that have no educational value. Dr. Walsh, chairman of the local committee at Philadelphia, did wonderfully well with his commercial exhibit in not only providing a sum of \$4,000 or \$5,000 to provide for the administrative activities of the new salaried secretary and headquarters, and the work that the association knows ought to be done and knows how to do for its members, but he demonstrated that a commercial exhibit must necessarily be managed by the trustees and their executive officer, the secretary, and that a local committee appointed for only one year is not the best agency to handle a commercial exhibit. Such a committee would have to begin all over again each year and embark on an enterprise unfamiliar to its members. So that it seems the commercial exhibit hereafter is to be a regular feature of the meetings.

DISTINGUISHED GUESTS

One of the distinguished guests of the association at Philadelphia was Sir Henry Burdett, editor of *The Hospital*, London, and perhaps the leading public health influence in Great Britain. Sir Henry has been a member of almost every war committee that has had to do with the health of the soldiers abroad and of the people at home. He came to the meeting avowedly for the purpose of learning something about what this country is doing in the matter of care of paying patients in hospitals. Every facility was accorded him to obtain as much light as possible on the problem in which he is engaged. What he is thinking about most is to so change the situation in British hospitals that, whereas now they are equipped to take care of only the poor, leaving the incompetent nursing homes of Great Britain to look after the well-to-do sick, the hospitals themselves

filled with the horrors of war from which he had recently come, that he found himself, in opening his topic, discussing the war from the British standpoint. Those who were not quite in sympathy with the cause of the allies, undoubtedly realized the strong feeling that actuated Sir Henry and were good enough to let the matter pass without argument.

This meeting made a really wonderful contribution to the British hospitals in the discussion of the problem of paying patients, and speakers were selected to discuss the subject from almost every phase of hospital work. Dr. Hurd spoke for the university hospital with a rich endowment, that had pay patients, and that, moreover, had to manage these patients so that many of them could become teaching material for the medical school; Dr. Warner, of Lakeside, discussed the problem from the same viewpoint; Dr. Arthur B. Ancker, of the City and



DR. ROBERT J. WILSON,
President American Hospital Association,
Superintendent New York Hospitals, New York City.

DR. WILLIAM H. WALSH,
Secretary,
Philadelphia, Pa.

MR. ASA BACON,
Treasurer,
Superintendent Presbyterian
Hospital, Chicago, Ill.

can provide for the well-to-do, even royal personages, and obtain at least part of their support from that source. As there was no place on the regular program available for Sir Henry's problem, part of the evening conference devoted to large hospital topics was given over to the purpose. Unfortunately, Sir Henry's mind and heart were so

County Hospital, St. Paul, discussed the problem from the standpoint of the large municipal institution supported by the public—that is, the city and county—but that accepted paying patients in addition to the indigent sick; Dr. Chas. H. Young, of the Presbyterian Hospital, New York, discussed the problem from the standpoint of the large gen-

eral hospital that devotes its energies mostly to the care of the poor, but that also takes extraordinarily good care of those able to pay; Miss Jamieson, superintendent of Grant Hospital, Columbus, Ohio, discussed the problem from the standpoint of the strictly private hospital, organized for profit and taking very few free patients.

With a discussion such as this, Sir Henry obtained an

seemed to be no issues that could bring up conflict or the least unpleasantness. There is, of course, always the old feeling by a few lay superintendents that there is discrimination against them on the part of medical superintendents, and vice versa; and there is the ever-existing feeling in some quarters that men superintendents discriminate against women, and there is usually a feeling present at



intimate knowledge of what variously situated hospitals in this country were doing about paying patients, and his expression on leaving the convention was that he had been amply repaid for the trip across the water and that he would take back for the use of British hospitals very much valuable information. It seems that such work as this should come from the American Hospital Association, and in this instance it came generously.

ON THE SIDE LINES

Usually at conventions, whether they be political or special, there are all sorts of gossip, and generally a good deal of association politics is talked. At Philadelphia the case was almost completely reversed; visitors in their idle hours talked about their hospital problems, about public health activities in their communities, about new work planned by them and for them and about them, and most of those at the meeting thought absolutely nothing and said absolutely nothing about the politics of the association, about the new officers to be elected, or new policies to be inaugurated. There

the association meetings that a few superintendents of large hospitals monopolize the discussions and "run things." At Philadelphia this was all reduced to a minimum; lay superintendents and medical men were closer together than ever before, and the medical superintendents recognized that the administration of a hospital was predicated on other things than a knowledge of medicine, and that many lay superintendents were conducting their institutions better than many of those who had medical training. The women easily held their own in the discussions on the floor at the sessions; and the small hospitals, more

than ever before, had their inning at the two splendid sessions presided over by Vice-President Miss Nettie B. Jordan, sessions crowded from beginning to end, and brimming over with enthusiasm and brilliant and helpful discussion.

In order to present a more detailed account of the business transactions of the various sessions of the convention, a full report of the secretary's minutes of the meeting is given herewith:

DR. A. R. WARNER,
First Vice-President,
Superintendent Lakeside Hospital,
Cleveland, Ohio.

DR. D. L. RICHARDSON,
Second Vice-President,
Superintendent Providence City Hospital,
Providence, R. I.

MISS GEORGIA M. NEVINS,
Third Vice-President,
Superintendent Garfield Memorial Hospital, Washington, D. C.

Secretary's Minutes of the Philadelphia Meeting

TUESDAY, SEPTEMBER 26

MORNING SESSION, 10 A. M.

The president called the meeting to order at 10:30 a. m.

Rt. Rev. Philip M. Rhinelander, bishop of Pennsylvania, opened the conference with prayer.

Mr. Edward James Cattell, statistician of the city of Philadelphia, in the absence of the mayor and on his behalf, delivered the address of welcome, to which the president responded. Mr. Daniel D. Test, superintendent Pennsylvania Hospital, Philadelphia, Pa., a charter member of the association, also delivered an address of welcome, to which the president responded.

Asa S. Bacon, treasurer of the association, then assumed the chair. Dr. Winford H. Smith, president, read the president's address. On motion of Dr. J. W. Fowler, superintendent Louisville City Hospital, the meeting provided for the appointment of a committee of three to take under consideration the suggestions in the president's address.

President Smith then resumed the chair and appointed as committee on Time and Place of the Next Convention Dr. Charles A. Drew, superintendent Worcester City Hospital, Worcester, Mass.; Dr. J. W. Fowler, superintendent Louisville City Hospital; and Mr. H. E. Webster, superintendent Royal Victoria Hospital, Montreal, Can.

Mr. Richard P. Borden, trustee of Union Hospital, Fall River,

In the absence of Miss Charlotte Aikens, chairman, Detroit, Mich., her report of Committee on Grading and Classification of Nurses was presented in abstract by Miss Emma A. Anderson.

The symposium on nursing presented in these two reports of subcommittees of the Committee on Hospital Progress was discussed by Dr. Winford H. Smith; Dr. Henry M. Hurd; Sir Henry Burdett, London, Eng.; Dr. J. W. Fowler; Dr. Frederic A. Washburn; Mr. Richard P. Borden; Dr. Thomas Walker, St. John, N. B., Can.; Miss Annie Goodrich; and Miss Emma A. Anderson.

Dr. Frederic A. Washburn moved the adoption of the report of the Committee on Grading and Classification of Nurses, with thanks to said committee, which was carried, by implication carrying the adoption of report of Committee on the Training of Nurses.

Dr. George Walker, chairman of the Maryland Vice Commission, delivered an address on its findings.

Dr. W. L. Babcock, superintendent Grace Hospital, Detroit, Mich., read a paper on "The Open Door Hospital," which was discussed by Dr. J. W. Fowler; Dr. Cleveland Shutt, commissioner of hospitals, St. Louis, Mo.; Dr. Thomas Walker; and Mr. Pliny O. Clark.

In the absence of Dr. Thomas Howell, his report of the Committee on Bureau of Hospital Information was read by Dr. Henry M. Hurd. On motion of Dr. Frederic A. Washburn action on the report was deferred until such time (September 27) as copies of the report could be printed and placed in the hands of the members of the association.



DR. WINFORD H. SMITH,
Trustee (two years),
Superintendent Johns Hopkins Hospital,
Baltimore, Md.



MISS MARY L. KEITH,
Trustee (one year),
Superintendent Rochester General Hospital,
Rochester, N. Y.

Mass., as chairman, made a report of the Committee on Constitution and By-laws, calling attention *in extenso* to changes proposed, the final consideration of which was, on motion of Mr. Borden, set for an hour (to be determined by the president) on Thursday morning, September 28.

AFTERNOON SESSION, 2 P. M.

The president called the meeting to order at 2:30 p. m.

A photograph of the assembly was taken.

The president appointed Drs. Babcock and Warner and Michael M. Davis, Jr., Ph. D., as a committee of three to consider the recommendations in the president's address, provided for at the morning session.

The president bespoke the members' consideration of the commercial exhibit under the auspices of the local committee.

On motion of Mr. Howell Wright, the chairman of the Committee on Constitution and By-laws was instructed to have printed at the expense of the association, and available by 10 a. m., September 27, 300 copies of the proposed amendments.

In the absence of Miss Ella Phillips Crandall, her report of the Committee on the Training of Nurses was read by Elizabeth A. Greener, superintendent of nurses, Mount Sinai Hospital, New York city.

EVENING SESSION, 8 P. M.

Symposium on Out-patient Work.

The president called the meeting to order at 8:15 p. m.

Dr. Richard C. Cabot, Boston, Mass., read a paper on "What Dispensary Work Should Stand For," which was discussed by Sir Henry Burdett; Mr. J. Ross Robertson, Toronto, Ontario; and Dr. Daniel D. Test.

Michael M. Davis, Jr., Ph. D., director Boston Dispensary, Boston, Mass., read, as chairman, the report of the special Committee on New Features in Dispensary Work (illustrated), which was discussed by Dr. A. B. Ancker, St. Paul, Minn.; and Dr. Anderson, Raleigh, N. C.; but no formal action was taken. A resolution presented by Dr. Andrew R. Warner, superintendent Lakeside Hospital, Cleveland, O., covering the future of the Out-patient Committee of the American Hospital Association, was, on the initiative of the president, referred to the Committee on Constitution and By-laws.

Miss Olga S. Halsey, assistant secretary American Association for Labor Legislation, read a paper on "Industrial Accident Cases in Dispensaries—Should They Be Accepted?—How Shall the Finance Be Managed?" Discussed by Dr. Daniel D. Test, Dr. Andrew R. Warner, Sir Henry Burdett, and Dr. Michael M. Davis, Jr.

Dr. Wm. F. Snow, secretary American Social Hygiene Association,

read a paper on "Clinics for Venereal Disease—Why We Need Them—How to Develop Them," which was discussed by Dr. George Walker, Baltimore, Md.; Mr. Ransom, Central Free Dispensary, Chicago, Ill.; and Dr. Andrew R. Warner.

WEDNESDAY, SEPTEMBER 27

MORNING SESSION, 10 A. M.

The president called the meeting to order at 10:15 a. m.

Dr. Charles H. Young, superintendent Presbyterian Hospital, New York city, read the report of the Committee on Medical Organization and Medical Education, which was discussed by Dr. J. M. Baldy, Philadelphia Pa.; and Dr. S. S. Goldwater, New York city.

Dr. Renwick R. Ross, superintendent Buffalo General Hospital, Buffalo, N. Y., read the report of the Committee on Development of the Association, which was discussed by Dr. Andrew R. Warner and Mr. Asa Bacon.

On motion of Mr. Bacon, giving effect to a suggestion in that paper, the president was authorized to appoint a committee to make recommendations for bringing the hospitals into the movement for preparedness, and present the recommendations at the next meeting of the association. On motion of Dr. Robert J. Wilson, certain subjects in

ing Same and Measures of Protecting the Hospital," which was discussed by Dr. Frederic A. Washburn, Dr. A. B. Ancker, and Dr. Henry M. Hurd.

Dr. Clyde G. Guthrie, associate in medicine, Johns Hopkins University, delivered an address on "The So-called Diphtheria Epidemics in General Hospitals—Preventive Measures," which was discussed by Dr. Renwick Ross; Dr. Thomas Walker, St. John, N. B.; Dr. Robert J. Wilson; Dr. Winford H. Smith; Dr. Milford White, superintendent White Hospital, Ravenna, O.; and Dr. Frederic A. Washburn.

Dr. Robert J. Wilson, superintendent Health Department Hospitals, Willard Parker Hospital, New York city, read a paper on "Disinfection and Other Practicable Methods of Preventing the Spread of Infection in Hospitals," which was discussed by Dr. D. L. Richardson, Providence, R. I.; Dr. A. B. Ancker; Miss Roberta M. West, superintendent of Nurses, Philadelphia Hospital for Contagious Diseases, Philadelphia; Mr. Pliny O. Clark; Dr. Thomas Walker; Miss Eugenia D. Ayers, superintendent Elizabeth General Hospital, Elizabeth, N. J.; Dr. Harry L. F. Locke, superintendent Hartford Isolation Hospital, Hartford, Conn.; and Miss Mary L. Keith, superintendent Rochester General Hospital, Rochester, N. Y.

The president appointed Dr. M. R. Pratt, superintendent Hebrew Hospital, Baltimore, Md.; Mr. J. B. Franklin, superintendent Texas



A section of the convention hall during one of the sessions.

that paper, properly referable to the Committee on Constitution and By-laws, were so referred.

The report of the Committee on Hospital Construction, by Dr. A. B. Ancker, superintendent City and County Hospital, St. Paul, Minn., was, at his request, read by title.

Dr. Frederick L. Hoffman, chief statistician of the Prudential Life Insurance Company, delivered an address on "The Qualified Statistical Analysis of Hospital Records," and was discussed by Sir Henry Burdett, London, Eng.

Mr. Grosvenor Atterbury, New York city, read a paper on "Hospitals and Esthetics," which was discussed by Dr. H. B. Howard and Mr. Atterbury.

The president directed attention to a stock of copies of the constitution and by-laws, incorporating proposed amendments.

Dr. Elliott P. Joslin, associate professor of Medicine, Harvard University, Cambridge, Mass., read a paper on "The Hospital Dietary," which was discussed by Dr. Thomas McCrae, professor of Medicine, Jefferson Medical School Hospital, Philadelphia, Pa.

AFTERNOON SESSION, 2:30 P. M.

The president called the meeting to order at 2:30 p. m.

Dr. Milton C. Winternitz, associate professor of Pathology, Johns Hopkins University, read a paper on "Autopsies—Methods of Obtain-

Baptist Memorial Sanitarium, Dallas, Tex.; and Dr. Daniel D. Test, superintendent Pennsylvania Hospital, Philadelphia, Pa., a committee to audit the treasurer's accounts.

The president announced that copies of the special report of the Committee on Grading and Classification of Nurses, submitted at Tuesday's afternoon session, could be secured by leaving names with the secretary, a reserve supply being available at the office, in Detroit, Mich., of the chairman, Miss Charlotte A. Aikens.

THURSDAY, SEPTEMBER 28

MORNING SESSION, 10 A. M.

The president called the meeting to order at 10:20 a. m.

Dr. W. L. Babcock, superintendent Grace Hospital, Detroit, Mich., read the report of the Committee to Consider the Recommendations in the president's address, which, on motion of Dr. Cleveland Shutt, was adopted.

Dr. Charles A. Drew, superintendent Worcester City Hospital, Worcester, Mass., read the report of the Committee on Time and Place of Next Meeting, naming Cleveland as the place and the second Tuesday of September, 1917, as the opening date, which was adopted.

Mr. Richard P. Borden, trustee Union Hospital, Fall River, Mass., presented the report of the Committee on Constitution and By-laws

Some of the Noncommercial Exhibits at the Convention of the American Hospital Association



Exhibit showing children's hospital crib, devised by Dr. W. H. Walsh; (on bed) nurses' uniforms used in the Delaware Hospital, Wilmington; (center) first coil used for practical x-ray work in Philadelphia and exhibited by the German Hospital, Philadelphia; (extreme right) crib and nursery equipment used at St. Christopher's Hospital, Philadelphia; on floor (left to right), treatment basket, designer unknown; miniature of clinic at Woman's Medical College, Philadelphia.

Exhibit of University of Pennsylvania (medical division), showing charts, forms, and patent lifting devices. Dolls show styles of uniforms worn.



Exhibit of Episcopal Hospital, Philadelphia, showing splints made by the hospital's own carpenter and machine shops, and several views and articles used in the hospital.

Exhibit showing (left to right) electrically heated bed for marasmic babies, designed by the Woman's Hospital, Philadelphia; crib and nurse's uniform used in the Buhl Hospital, Sharon, Pa., private room tray service used by the Jefferson Hospital, Philadelphia. Below (left to right) is shown milk refrigerator and an incubator used and designed by the Woman's Hospital, Philadelphia.



substantially as submitted at Tuesday's session, with certain minor suggestions as amendments drawn from papers, including the president's address read at this conference, and from the members, some of whom had met with the committee. As participants in the discussion of the constitution and by-laws, leading up to adoption in final form, were, besides Mr. Borden, chairman of the committee, Mr. Howell Wright, Cleveland, O.; Dr. S. S. Goldwater; Dr. Frederic A. Washburn; Dr. Daniel D. Test; Dr. Thomas Walker; Dr. Charles A. Drew; and Dr. Henry M. Hurd.

On motion of Dr. W. L. Babcock, the nominating committee was instructed to present, in its report on Friday, nominations of three trustees, in accordance with the newly adopted constitution and by-laws.

On behalf of the Committee on Bureau of Hospital Information, whose report was read at a previous session of this conference, Dr. Frederic A. Washburn moved its adoption, that the trustees of the association be authorized to employ a paid permanent secretary, and that it is the hope of the association that its officers may be engaged and headquarters be established which will serve as a bureau of information not later than July 1, 1917. Dr. S. S. Goldwater stated that the constitution provided that "the secretary shall be elected annually by a vote of the association," and moved to amend by striking out the word "permanent." The amendment was accepted by the mover of the original motion, which, thus amended, prevailed.

Dr. Renwick Ross, in line with the recommendation in the report of

a paper on "Hospital Standardization," which was discussed by Dr. H. B. Howard, Dr. Cleveland Shutt, and Dr. Andrew R. Warner. On motion of Dr. Shutt, amended by Dr. Howard, and with their consent modified (as to source of appointment) by the president, the board of trustees was directed to appoint a committee of three, whereof President Smith shall be chairman, to confer with a committee representing the American College of Surgeons as to the best means of furthering the work of that body.

Dr. Frederic Brush, superintendent Burke Foundation, White Plains, N. Y., read a paper on "Convalescent Hospitals—Methods—Results," which was discussed by Sir Henry Burdett; Dr. H. B. Howard; Dr. E. E. Holt, Portland, Me.; Dr. S. S. Goldwater; and Mr. Ransom, Chicago, Ill.

EVENING SESSION, 8 P. M.

Round Table Session for Large Hospitals—Conducted by Dr. John A. Hornsby, Editor THE MODERN HOSPITAL.

Dr. John A. Hornsby, chairman, called the meeting to order at 8:30 p. m.

Dr. Charles A. Drew, superintendent Worcester City Hospital, Worcester, Mass., read a paper on "Stumbling-blocks to Team-work," which was discussed by Dr. J. W. Fowler, Dr. Winford H. Smith, Dr. Daniel D. Test, and Dr. A. B. Ancker.

At the chairman's request, Sir Henry Burdett spoke to the question of the principles of paying patients, introducing his remarks with a dissertation on England's endeavor toward preparedness for speedy and efficient hospital care of her wounded soldiery in the war now raging. The participants in the discussion ensuing were Dr. Henry M. Hurd; Dr. A. B. Ancker; Dr. Andrew R. Warner; Miss Mary A. Jamieson, superintendent Grant Hospital, Columbus, O.; Mr. James V. Norris, superintendent New York Polyclinic Hospital, New York city; Miss Laura E. Coleman, superintendent Homeopathic Hospital, Buffalo, N. Y.; and Dr. Rowland B. Harris.

At the chairman's request, Dr. C. Irving Fisher, New York city, gave a familiar talk on the relations that should exist between the superintendent, the board of trustees, and the medical staff of the hospital.

The remainder of the time was devoted to propounding questions previously submitted in writing, as to the majority, and answering them.

FRIDAY, SEPTEMBER 29

MORNING SESSION, 10 A. M.

The president called the meeting to order at 10:20 a. m.

In the absence of Dr. H. T. Summersgill, superintendent University of California Hospital, San Francisco, Cal., his report of the Committee on Legislation of the American Hospital Association was read by the secretary. On motion of Dr. J. W. Fowler, amended with his consent by the president, it

was referred to the board of trustees for their information.

The report of the Committee on Membership, read by the secretary, was as follows: membership in the American Hospital Association June 15, 1,185; reinstated during the year, 18; new members, 309; making a total of 327. Active members, 939; associate members, 232; honorary members, 14; making a total membership at present of 1,185 members. New members were added from forty-two states, and indorsed by 106 members of the association. On motion the report was accepted.

Dr. John A. Hornsby, Chicago, Ill., editor of THE MODERN HOSPITAL, made a report of the Committee on Hospital Standardization, which, on motion of Dr. Henry M. Hurd, was accepted and the committee discharged.

On motion of Dr. Henry M. Hurd, the trustees were instructed to appoint a committee on necrology, to report each year the names of deceased members, and such sketches of them as in the judgment of the committee may seem proper.

Dr. M. R. Pratt read the treasurer's report, which, on motion, was received and referred to the Auditing Committee.

Dr. Andrew R. Warner, superintendent Lakeside Hospital, Cleveland, O., read the report of the Committee on Hospital Finances and Cost Accounting, carrying with it the following resolution:

Resolved, that a special committee of three on hospital accounting be appointed by the president, to serve until discharged by the association. The committee shall, from time to time, propose such recom-



Registration booth of the convention showing general form of decorations of the exhibits.

the Committee on Development of the Association at Wednesday's session, moved that THE MODERN HOSPITAL be the official organ of the association, and that so long as it is so regarded it be subject to the censorship of the board of trustees of the association. In the discussion ensuing the participants were Mr. O. H. Bartine; Dr. Walter Morritt; Miss Charlotte A. Aikens; Mr. Howell Wright; Dr. James Alderson; Dr. H. B. Howard; Mr. John R. Howard, Jr.; Dr. Daniel D. Test; Miss Ella C. Ingwerson, superintendent La Crosse Hospital, La Crosse, Wis.; Sir Henry Burdett; Mr. Richard P. Borden; and Dr. Charles A. Drew. The matter was referred to the board of trustees for consideration and for report to the next convention.

Dr. Thomas B. Hartzell, University Hospital, Minneapolis, Minn., read a paper on "Dental Clinics in General Hospitals" (illustrated).

AFTERNOON SESSION, 2 P. M.

The president called the meeting to order at 2:50 p. m.

Mr. O. H. Bartine, superintendent Hospital for Ruptured and Crippled, New York city, read a paper on "The Building of the Hospital—Departments and Rooms," a discussion of which was read by Dr. A. C. Bachmeyer, superintendent Cincinnati General Hospital, Cincinnati, O. Other participants were Dr. S. S. Goldwater; Mr. C. S. Loder, New York city; Dr. J. W. Fowler; Mr. J. H. S. Parke, Montreal; Sir Henry Burdett; and Dr. A. B. Ancker.

Dr. John G. Bowman, director American College of Surgeons, read

mentations leading to more uniform and comprehensive accounting as it shall deem advisable. The recommendations and the report of this committee shall be considered by the association, and, if the recommendations are adopted, an effort to cause their use in hospitals represented in this association shall be made by members of this association representing such hospitals.

Mr. Pliny O. Clark moved the adoption of the report with the resolution, which prevailed.

Dr. S. S. Goldwater read a paper on "The Hospital and the Surgeon," which was not discussed, owing to the lateness of the hour and the absence of Dr. John G. Clarke, professor of gynecology, University of Pennsylvania, scheduled to open the discussion.

Dr. Mason R. Pratt, superintendent Hebrew Hospital, Baltimore, Md., read the report of the Auditing Committee, consisting of Dr. Mason R. Pratt and Dr. Daniel D. Test, which, on motion, was received.

Dr. George O'Hanlon, superintendent Bellevue and Allied Hospitals, New York city, read the report of the Committee on Efficiency and Progress, which, on motion, was accepted. No discussion.

In the absence of both Dr. Renwick R. Ross and Dr. H. B. Howard, and at the president's request, Dr. W. L. Babcock read the following report of the nominating committee:

The following nominations have been made by the nominating committee: for president, Dr. Robert J. Wilson, superintendent of hospitals, New York Department of Health; first vice-president, Dr. A. R. Warner, superintendent Lakeside Hospital, Cleveland; second vice-president, Dr. D. L. Richardson, superintendent City Hospital, Providence, R. I.; third vice-president, Miss Georgia M. Nevins, superintendent Garfield Memorial Hospital, Washington, D. C.; secretary, Dr. Wm. H. Walsh, Philadelphia, Pa.; treasurer, Mr. Asa S. Bacon, superintendent Presbyterian Hospital, Chicago. For trustees: for the term of three years, Mr. Richard P. Borden, president board of trustees of Union Hospital, Fall River, Mass.; for the term of two years, Dr. Winford H. Smith, superintendent Johns Hopkins Hospital, Baltimore; for the term of one year, Miss Mary L. Keith, superintendent Rochester General Hospital, Rochester, N. Y.

On motion of Dr. S. S. Goldwater the report was accepted and the secretary was instructed to cast the ballot in favor of the nominees named, and the president declared them elected to the respective offices. At the request of the retiring president, Dr. Robert J. Wilson, New York city, president-elect, was escorted to the chair, both officers making appropriate remarks.

Mr. Richard P. Borden, trustee Union Hospital, Fall River, Mass., moved a vote of thanks to the mayor of Philadelphia and to Dr. Wm. H. Walsh, chairman of the Committee on Local Arrangements, for services and hospitalities rendered to the association, the motion prevailing.

Dr. Daniel D. Test, on behalf of Dr. Walsh, chairman of the local committee, and at the latter's request, expressed deep appreciation of the benefits conferred by the guests on the hosts, and stated that never before had there been such cooperation between the hospitals of Philadelphia or so much constructive work done by them in the same length of time. Dr. Test eulogized Dr. Mohler, of the Entertainment Committee; Dr. Page, of the Transportation Committee; Miss Sutton, of the Publication Committee; and Dr. Seabrook, of the Committee on Noncommercial Exhibits; but, above all, the chairman of the local committee, for the fulfillment of his functions in general, and in particular for his untiring efforts in producing a splendid commercial exhibit, with attending financial success.

Dr. Test, furthermore, moved a vote of thanks and appreciation to Dr. Winford H. Smith, retiring president, for the splendid program and the courteous conduct of the business of the conference; Dr. Andrew R. Warner, Cleveland, O.; and Dr. John A. Hornsby, Chicago, Ill., seconded it; Sir Henry Burdett indulged in reminiscence and in aspirations for the association's future. The president put the motion, with interpolation of thanks to the retiring officers, which prevailed, and the president declared the American Hospital Association adjourned until the second Tuesday of September, 1917, to meet in Cleveland, Ohio.

Important Announcements by the Secretary

BY DR. WILLIAM H. WALSH.

Headquarters for the association will be established as soon as possible in the Medical Arts Building, and in the interim temporary offices will be opened in the Baxter Building, 1414 South Penn Square, Philadelphia. This temporary arrangement is made necessary by the present unfinished condition of the new building.

The secretary desires to announce that members of the association who were unable to attend the convention may receive the booklet and badge on request. It will be necessary to send also 4 cents in stamps to pay postage. The officers of the association regard the badge as particularly

unique and appropriate, and it was so greatly admired that they believe many of the members will want one.

The secretary also desires to announce that annual reports of all hospitals in the United States and Canada are desired by the association, and reports should be of 1916. Each member is requested, in addition to sending in his own report, to see that reports of neighboring hospitals whose officers are not members are sent in.

Those Who Registered at the American Hospital Association Meeting

A great many visitors to the Philadelphia Convention, both members and guests, and traveling friends of members, neglected to register with the secretary and treasurer of the association, but the following is a list of the members who actually registered:

Adams, Ada F.	Nassau Hosp. Assn., Mineola, L. I.
Alderson, James	Finley Hosp., Dubuque, Iowa.
Aldridge, Edith B.	National Homeo. Hosp., Washington, D. C.
Alexander, Dr. A. B.	Municipal Hosp., Winnipeg, Man.
Alexander, Dr. Jas. R.	Presbyterian Hosp., Charlotte, N. C.
Allen, Bertha W.	Lowell Gen. Hosp., Lowell, Mass.
Allyn, Harriet J.	Griffin Hosp., Derby, Conn.
Altschul, David S.	New York City.
Allison, Emily C.	Pontiac City Hosp., Pontiac, Mich.
Ancker, Arthur B.	City and County Hosp., St. Paul, Minn.
Ancker, Elizabeth W.	Filcher Private Hosp., Brooklyn, N. Y.
Anderson, Albert	State Hosp., Raleigh, N. C.
Anderson, Emma A.	N. E. Baptist Hosp., Boston, Mass.
Appel, Mrs. Katherine	Howard Hosp., Philadelphia, Pa.
Ayer, Miss Elizabeth D.	Elizabeth Gen. Hosp., Elizabeth, N. J.
Babcock, Dr. W. L.	Grace Hospital, Detroit, Mich.
Bachmeyer, Dr. A. C.	Cincinnati Gen. Hosp., Cincinnati, Ohio.
Bacon, Asa	Presbyterian Hosp., Chicago, Ill.
Bacon, Dr. Chas. Bowman	City Hosp., Blackwell Island, New York City.
Bailey, George	Cooper Hosp., Camden, N. J.
Bailey, Minnie	Prince of Peace Hosp., Philadelphia, Pa.
Baker, Henry R.	Brooklyn Eye and Ear Hosp., Brooklyn, N. Y.
Ball, Dr. Otho F.	THE MODERN HOSPITAL, St. Louis, Mo.
Barnaby, Marietta D.	Henry Heywood Mem. Hosp., Gardner, Mass.
Barnes, Sydney J.	Orange Mem. Hosp., Orange, N. J.
Barrett, Ida M.	Blodgett Mem. Hosp., Grand Rapids, Mich.
Bartine, Oliver H.	New York Society for Relief of the Ruptured and Crippled, New York City.
Bates, F. O.	Roper Hosp., Charleston, S. C.
Bates, W. Lincoln	Dr. Bates Sanatorium Co., Jamestown, R. I.
Bauernfeind, J. H.	Evangelical Deaconess Hosp., Chicago, Ill.
Baur, Dr. Charles E.	Barnes Hosp., St. Louis, Mo.
Baxter, D. E.	THE MODERN HOSPITAL, New York City.
Becker, Ray	THE MODERN HOSPITAL, Chicago, Ill.
Beers, Mollie	Cambria Steel Hosp., Johnstown, Pa.
Benjamin, Sister M.	St. Francis Hosp., Trenton, N. J.
Bigelow, Wilbur B.	Salem Hosp., Salem, Mass.
Bigger, James H.	Western Penna. Hosp., Pittsburg, Pa.
Bishop, Howard E.	Robert Packer Hosp., Sayre, Pa.
Blanchfield, Florence A.	Suburban Gen. Hosp., Bellevue, Pa.
Borden, Richard P.	Union Hosp., Fall River, Mass.
Bosworth, Dr. Robinson	Advisory Commission of Minnesota State Sanatorium, St. Paul, Minn.
Bowen, Sara A.	Springfield Hosp., Springfield, Mass.
Bremer, L.	Columbia Hosp., Columbia, S. C.
Brian, Celia E.	Danville Gen. Hosp., Danville, Va.
Briggs, John R.	Pottstown Hosp., Pottstown, Pa.
Brooks, Winifred H.	Wesson Mat. Hosp., Springfield, Mass.
Browne, Miss E. M.	Douglass Hosp., Philadelphia, Pa.
Brush, Edward N.	Sheppard and Enoch Pratt Hosp., Baltimore, Md.
Brush, Dr. Frederic	Burke Foundation, White Plains, N. Y.
Buckenham, Dr. J. E. B.	Philadelphia Hosp., for Contagious Diseases, Philadelphia, Pa.
Bunn, F. S.	Youngstown Hosp., Youngstown, Ohio.
Burby, Nelly R.	Richmond Hill, L. I.
Burdett, Sir Henry	The Lodge, London, Eng.
Burgan, John L.	State Hosp., Scranton, Pa.
Burns, Miss Sara	New York Skin and Cancer Hosp., New York City.
Buse, Alice E.	Corry Hosp. Assn., Corry, Pa.
Butterfield, Caroline L.	Martin's Ferry Hosp., Martin's Ferry, Ohio.
Byrne, Teresa A.	Goshen Emergency Hosp., Goshen, N. Y.
Caldwell, Dr. Bert W.	Allegheny Gen. Hosp., Pittsburg, Pa.
Callender, Eliza B.	Bradford Hosp., Bradford, Pa.
Cameron, Florence	Beaver Valley Gen. Hosp., New Brighton
Camp, Dr. F. K.	Wesley Hosp., Oklahoma City, Okla.
Carmelika, Sister M.	Mercy Hosp., Baltimore, Md.
Carmichael, Dr. F. A.	Osawatomie State Hosp., Osawatomie, Kans.
Caroline, Sister	Children's Hosp., Boston, Mass.
Carson, Lillian H. S.	Pilcher Hosp., Brooklyn, N. Y.
Case, Clara B.	Medford Sanatorium for Working People, Medford, L. I.
Cushman, Alice C. S.	Beverly Hosp., Beverly, Mass.
Chambers, Mrs. L. A.	Geneva City Hosp., Geneva, N. Y.
Chapman, Frank E.	Mt. Sinai Hosp., Cleveland, Ohio.
Chappell, Frances	St. Luke's Hosp., St. Louis, Mo.
Christianson, A. Jeanette	Northwestern Hosp., Minneapolis, Minn.
Clapp, Edith J. L.	Englewood Hosp. Assn., Englewood, N. J.

- Clark, Dr. C. K. Toronto Gen. Hosp., Toronto, Can.
 Clark, Raymond. Greenpoint Hosp., Brooklyn, N. Y.
 Clarke, Mary A. White Haven Sanatorium, Newark, N. J.
 Clarke, P. O. Ohio Valley Gen. Hosp., Wheeling, W. Va.
 Cleland, Alice C. Cooley Dickinson Hosp., Northampton, Mass.
 Coleman, Laura E. Buffalo Homeopathic Hosp., Buffalo, N. Y.
 Coleman, Louise W. House of the Good Samaritan, Boston, Mass.
 Collins, Herbert O. City Hosp., Minneapolis, Minn.
 Conley, Walter H. Metropolitan Hosp., New York City
 Conner, Miss Mabel. Northern Pacific Hosp., Tacoma, Wash.
 Cook, Melissa J. Melrose Hosp. Assn., Melrose, Mass.
 Coon, Dr. J. W. Pen Bryn Sanatorium, Pewaukee, Wis.
 Cowie, Edith M. Bronson Hosp., Kalamazoo, Mich.
 Cox, Edith I. Faulkner Hosp., Boston, Mass.
 Cratty, John M. Presbyterian Hosp., Philadelphia, Pa.
 Crew, E. R. Miami Valley Hosp., Dayton, Ohio.
 Crow, Wm. D. St. Barnabas Hosp., Newark, N. J.
 Croughan, Patrick J. Paterson Isolation Hosp., Paterson, N. J.
 Cumming, Margaret M. C. H. Buhl, Sharon, Pa.
 Curry, Margaret J. Lakeside Hosp., Chicago, Ill.
- Darlington, Miss Laura S. Johnston Willis Hosp., Richmond, Va.
 Darrach, Chas. Gobrecht. Honorary member, Philadelphia, Pa.
 Davidson, S. G. Babies' Hosp. of Philadelphia, Philadelphia, Pa.
 Davies, Miss Eliza. J. C. Blair Mem. Hosp., Huntingdon, Pa.
 Davis, E. Mildred. Knickerbocker Hosp., New York City.
 Davis, Michael M. Boston Dispensary, Boston, Mass.
 Davison, Nina P. Chambersburg Hosp., Chambersburg, Pa.
 Deaver, Mary Florence. The Christ Hosp., Cincinnati, Ohio.
 Deetting, Katharine R. Franklin Square Hosp., Baltimore, Md.
 Denton, Miss Emily. General Hosp., Saranac Lake, N. Y.
 Donenwirth, Emma. People's Hosp., Akron, Ohio.
 Donet, E. D. Memorial Hosp., Mt. Pleasant, Pa.
 Dorr, Wm. R. St. Luke's Hosp., San Francisco, Cal.
 Dougherty, Fannie A. Cottage State Hosp., Philipsburg, Pa.
 Dougherty, John E. Greenpoint Hosp., Brooklyn, N. Y.
 Dowling, D. G. Utica Homeopathic Hosp., Utica, N. Y.
 Dretzka, Dr. L. J. Detroit Receiving Hosp., Detroit, Mich.
 Drew, Chas. A. Worcester City Hosp., Worcester, Mass.
 Duncan, Jennette F. Delaware Hosp., Wilmington, Del.
 Dundas, Ethel B. Rochester Gen. Hosp., Rochester, Pa.
- Earle, Jr., Mrs. George H. Woman's Hosp., Philadelphia, Pa.
 Eden, Marie Close. Columbia Hosp., Wilkingsburg, Pa.
 Eitel, Mrs. Geo. G. The Eitel Hosp., Minneapolis, Minn.
 Ellicott, Nancy P. Rockefeller Institute Hosp., New York City.
 Emma, Sister. Hospital of St. Barnabas, Newark, N. J.
 Essig, Anna K. Coatesville Hosp., Coatesville, Pa.
 Etheldreda, Sister M. Mercy Hosp., Pittsburg, Pa.
 Ewin, Miss H. Jane. Free Hospital for Women, Brookline, Mass.
- Fahlberg, Anna K. Williamsburg Hosp., Williamsburg, N. Y.
 Fay, John E. Hartford Hosp., Hartford, Conn.
 Fellows, Mabel C. City Hosp., Washington, Pa.
 Fisher, C. Irving. Presbyterian Hosp., New York City.
 Fleming, Blanche K. Grove City Hosp., Grove City, Pa.
 Fletcher, Mabel. Hudson City Hosp., Hudson, N. Y.
 Fogg, Mrs. Anna L. Woman's Hosp., Philadelphia, Pa.
 Foley, L. G. 968 Linwood Place, St. Paul, Minn.
 Ford, Mrs. A. Louise. Children's Hosp., Pittsburg, Pa.
 Fost, Estelle V. Uniontown Hosp., Uniontown, Pa.
 Foukalsrud, A. O. Norwegian Hosp., Brooklyn, N. Y.
 Fowler, Benj. M. Vassar Bros. Hosp., Poughkeepsie, N. Y.
 Fowler, J. W. Louisville City Hosp., Louisville, Ky.
 Fox, L. Webster. Medico-Chi. Hosp., Philadelphia, Pa.
 Fox, Rena P. The Babies' Hosp., of Philadelphia, Philadelphia, Pa.
- Fraser, Jean C. Vincent Mem. Hosp., Boston, Mass.
 Frauenthal, Henry H. Hosp. for Deformities and Joint Diseases, New York City.
- Freidinger, Stella M. John C. Proctor Hosp., Peoria, Ill.
 Friedman, Nina Dale. German Hosp., Chicago, Ill.
 Frost, Mabel E. Jackson City Hosp., Jackson, Mich.
 Fulgentia, Sister M. St. Mary's Hosp., Philadelphia, Pa.
 Fuller, David H. Municipal Hosp., Fall River, Mass.
- Gable, Mary N. Chambersburg Hosp., Chambersburg, Pa.
 Gaggis, Alice Muriel. Norton Mem. Infirmary Louisville, Ky.
 Gailey, Ida M. Conemaugh Valley Mem. Hosp. Johnstown, Pa.
- Gainor, Elizabeth M. Washington Hosp., Washington, Pa.
 Gallery, Elizabeth A. Reading Hosp., Reading, Pa.
 Garrett, Anna C. Frankford Hosp., Philadelphia, Pa.
 Garrison, Charlotte J. City Hosp. Sanatorium, Kalamazoo, Mich.
 Gartshore, Leut.-Col. W. M. Victoria Hosp., London, Can.
 Gary, I. Clock. People's Hosp., Chicago, Ill.
 Geffen, Joseph. Mt. Sinai Hosp., Philadelphia, Pa.
 Genevieve, Sister M. St. Elizabeth's Hosp., Youngstown, Ohio.
 Georgina, Sister M. St. Agnes Hosp., Philadelphia, Pa.
 Geraldine, Sister M. St. Elizabeth's Hosp., Youngstown, Ohio.
 Gibson, Gertrude M. Prospect Heights Hosp., Brooklyn, N. Y.
 Giffen, Elizabeth C. Bethesda Hosp., Zanesville, Ohio.
 Gill, Chas. A. Germantown Hosp., Germantown, Pa.
 Golder, Miss Louise. Bethesda Hosp., Cincinnati, Ohio.
 Goldwater, Dr. S. S. Mt. Sinai Hosp., New York City.
 Goodwin, Dr. H. C. Albany Hosp., Albany, N. Y.
 Graham, Mabel. Christ Hosp., Jersey City, N. J.
 Graham, W. T. University Hosp., Iowa City, Iowa.
 Grant, Janet A. Moses Taylor Hosp., Scranton, Pa.
 Gray, Mabel F. Winnipeg Gen. Hosp., Winnipeg, Can.
 Greene, Frederick D. United Hosp. Fund of New York, New York City.
- Greener, Elizabeth A. Mt. Sinai Hosp., New York City.
 Griffin, Rev. M. Y. St. Elizabeth's Hosp., Youngstown, Ohio.
 Groyer, Dr. Frederick. Lincoln Hosp. and Home, New York City.
 Gunther, Leopoldine. Greenpoint Hosp., Brooklyn, N. Y.
 Gustafson, Dr. Olga F. American Hosp., Chicago, Ill.
 Gutwald, Kathrun. Mercy Hosp., Columbus, Ohio.
- Hamilton, Alfreda M. Protestant Hosp. Assn., Columbus, Ohio.
 Hamilton, Stewart. Harper Hosp., Detroit, Mich.
 Happersett, Miss C. Lock Haven Hosp., Lock Haven, Pa.
- Harper, Mrs. W. D. Monmouth Mem. Hosp., Long Branch, N. J.
 Harris, Betsy L. Children's Hosp., Detroit, Mich.
 Harris, Rowland H. Battle Creek Sanatorium, Battle Creek, Mich.
 Hartry, Miss Harriett. St. Barnabee Hosp., Minneapolis, Minn.
 Hatfield, Elizabeth L. Bayonne Hosp. and Disp., Bayonne, N. J.
 Hawke, W. W. Eyrie Sanatorium, Clifton Heights, Pa.
 Haworth, E. P. Willows and Grace Hosps., Kansas City, Mo.
 Hayden, Mrs. Sarah. Augusta Gen. Hosp., Augusta, Mo.
 Hayes, Mary A. U. of P. Hosp., Philadelphia, Pa.
 Hays, Dr. M. J. Kane Summit Hosp., Kane, Pa.
 Heil, Martha J. Jane McAlister Hosp., Waukegan, Ill.
 Hemingway, Alice N. Aultman Hosp., Canton, Ohio.
 Henning, Emma M. Jersey City Hosp., Jersey City, N. J.
 Herlihy, Miss Margaret. Brooklyn E. D. Disp. and Hosp., Brooklyn.
 Higgins, Winifred A. Ithaca City Hosp., Ithaca, N. Y.
 Hildegarde, Sister M. M. Mercicordia Hosp., West Philadelphia, Pa.
 Hildreth, Chas. B. St. Luke's Hosp., Cleveland, Ohio.
 Hilker, F. C. Pottsville Hosp., Pottsville, Pa.
 Hill, Dr. C. D. Watts Hosp., West Durham, N. C.
 Hill, Miss M. Y. West Side Hosp. Assn., Scranton, Pa.
 Hill, R. C. N. Y. State Soldiers and Sailors' Home Hosp., Bath, N. Y.
- Hills, Mrs. Mabel. City Hosp., Parkersburg, W. Va.
 Hirst, Ralston S. West Jersey Homeopathic Hosp., Camden, N. J.
- Hogle, Alma C. Huron Road Hosp., Cleveland, Ohio.
 Holloper, Chio. Robert Packer Hosp., Sayre, Pa.
 Holmes, Emily A. Chester Co. Hosp., West Chester, Pa.
 Holmes, James E. M. E. Hosp., Brooklyn, N. Y.
 Holmes, Dr. May Salona. Belmont Hosp., Worcester, Mass.
 Holmes, Susan. Abbott Hosp., Minneapolis, Minn.
 Holt, Dr. Erastus Eugene. Maine Eye and Ear Infirmary, Portland, Me.
 Hooper, Edith A. St. Luke's Hosp., New York City.
 Horn, Jessie A. Hahnemann Hosp., Chicago, Ill.
 Hornbeak, S. H. Physicians and Surgeons' Hosp., Corsicana, Tex.
- Hornsby, Dr. John A. THE MODERN HOSPITAL, Chicago, Ill.
 Howard, Dr. Herbert B. Peter Bent Brigham Hosp., Boston, Mass.
 Howard, John R. N. Y. Orthopaedic Hosp., New York City.
 Howerstod, Rev. T. T. United Church Hosp. Assn., Minneapolis, Minn.
- Humphreys, Ethel J. J. Lewis Crozer Hosp., Chester, Pa.
 Hunt, Miss Alice M. Truesdale Hosp., Fall River, Mass.
 Hunter, Miss J. Alison. Grace Hosp., New Haven, Conn.
 Hurd, Dr. Henry M. Johns Hopkins Hosp., Baltimore, Md.
 Hyslop, Blanche. Goddard Hosp., Brockton, Mass.
- Ingwersen, Ella C. La Crosse Hosp., La Crosse, Wis.
 Innocent, Sister M. Mercy Hosp., Pittsburg, Pa.
 Irwin, Fairfax. Senior Surgeon U. S. Pub. Health Service, Philadelphia, Pa.
- Ivory, Miss Margaret. Windber Hosp., Windber, Pa.
- Jackson, Miss Esther T. Augustana Hosp., Chicago, Ill.
 Jackson, J. Allen. Philadelphia Hosp. for Insane, Philadelphia, Pa.
- Jackson, Mary C. W. C. Graham Protestant Hosp., Keokuk, Ia.
 Jacobson, Barbara E. Anderson Co. Hosp., New York City.
 Jamieson, Mary A. Grant Hosp., Columbus, Ohio.
 Jamison, Celeste. Rush Hosp., Philadelphia, Pa.
 Jeffrey, Annie T. St. Christopher's Hosp., Philadelphia, Pa.
 Johnston, Annie P. W. Philadelphia Gen. Homo. Hosp., Philadelphia, Pa.
- Johnston, Maude L. Rochester Homeo. Hosp., Rochester, N. Y.
 Jones, John W. Sheppard and Enoch Pratt Hosp., Baltimore, Md.
- Jones, Miss L. V. St. Luke's Hosp., Newburgh, N. Y.
 Jones, Wm. W. Bridgeport Hosp., Bridgeport, Conn.
 Jones, Dr. Eleanor C. Woman's Hosp., Philadelphia, Pa.
 Jordan, Nettie B. Aurora Hosp., Aurora, Ill.
 Justis, Miss L. J. Brokaw Hosp., Normal, Ill.
- Keegan, L. S. Gen. Hosp., St. John, Newfoundland.
 Keith, Mary L. Rochester Gen. Hosp., Rochester, N. Y.
 Keller, Lydia H. Asbury Hosp., Minneapolis, Minn.
 Kelley, E. A. Highsmith Hosp., Fayetteville, N. C.
 Kelley, Maude M. Washington City Hosp., Washington, Pa.
 Kelly, Miss Bree S. Eleanor Moore Hosp., Boone, Iowa.
 Kendall, Henry H. Newton, Mass., Boston, Mass.
 Kendall, Sarah D. Memorial Hosp., Athol, Mass.
 Keraus, Charlotte. Flower Hosp., Toledo, Ohio.
 Klopp, Henry D. Homeopathic State Hosp., Allentown, Pa.
 Korndoeffer, Aug. Children's Homeo. Hosp., Philadelphia, Pa.
 Kraemer, Miss E. K. Frederick Ferris Thompson Hosp., Canandaigua, N. Y.
- Kurtz, Ida M. Northwestern Gen. Hosp., Lancaster, Pa.
- Lake, A. Masonic Home, Burlington, N. J.
 Lambert, Roma M. Home and Hosp., Findlay, Ohio.
 Lamborn, H. Park Ave. Hosp., Denver, Col.
 La Moure, Chas. T. Connecticut Training School for Feeble-Minded, Lakeville, Conn.
- Land, Mary A. Mount Vernon Hosp., Mt. Vernon, N. Y.
 Landers, Geo. B. Presbyterian Hosp., New York City.
 Langley, Aida B. Parkview Hosp., Jamestown, N. Dak.
 Laughlin, Anna E. Bryn Mawr Hosp., Bryn Mawr, Pa.
 Lauman, Anna. Lutheran Hosp., Ft. Wayne, Ind.
 Lauman, Gertrude H. Children's Homeo. Hosp., Philadelphia, Pa.
 Lawler, E. W. Johns Hopkins Hosp., Baltimore, Md.
 Lawrence, Ella A. Cumberland Street Hosp., Brooklyn, N. Y.
 Lawson, M. A. City Hosp., Akron, Ohio.
 Leary, Montgomery E. Iola Sanatorium, Rochester, N. Y.
 Le Febvre, Theodora H. Binghamton City Hosp., Binghamton, N. Y.
 Leiper, E. F. Episcopal Hosp., Philadelphia, Pa.
 Levy, Archie M. Beth Israel Hosp., New York City.
 Lindberg, Emma C. Lawrence Hosp., Bronxville, N. Y.
 Lindblad, C. A. Homeopathic Hosp., Pittsburg, Pa.
 Lindemann, Louise. Lutheran Hosp., Hampton, Iowa.
 Lindholm, D. G. Bureau of Municipal Research, N. Y. City.
 Littlefield, Miss Julia. Homeopathic Hosp., Albany, N. Y.
 Locke, Dr. H. L. F. Hartford Isolation Hosp., Hartford, Conn.
 Lockerby, Anna C. Laconia Hosp., Laconia, N. H.

- Loder, Cornelius S.....New York City.
 Loeb, Elizabeth V.....Medico-Chirurgical Hosp., Philadelphia, Pa.
 Long, J. M.....Georgia Baptist Hosp., Atlanta, Ga.
 Long, Joseph B.....Miscricordia Hosp., Philadelphia, Pa.
 Love, May L.....Litchfield Co. Hosp., Winsted, Conn.
 Loveland, F. A.....Corry Hosp., Corry, Pa.
 Lurkins, Frances L.....Laura Franklin Children's Hosp., New York City.
 Lynch, Anna M.....The Garretson, Philadelphia, Pa.
 Lynch, Miss S. T.....St. Luke's Hosp., Bluefield, W. Va.
 MacEachern, Dr. M. T.....General Hosp., Vancouver, B. C.
 MacGarry, Mary C.....Charter Oak Private Hosp., Hartford, Conn.
 MacKnight, Adam S.....Massachusetts State Department of Health, Fall River, Mass.
 MacLaren, Amy F.....State Hosp., Warren, Pa.
 MacLeod, Dr. Norman M.....Newport Hosp., Newport, R. I.
 MacNichols, Miss C. E.....St. Peters Hosp., Charlotte, N. C.
 MacNichols, Miss Ella H.....Presbyterian Hosp., Charlotte, N. C.
 Manney, J. H.....Lincoln Mem. Hosp., Knoxville, Tenn.
 Mansfield, Bernice D.....Eastern Maine Gen. Hosp., Bangor, Me.
 Marshall, Miss C. A.....Bath City Hosp., Bath, Me.
 Mason, Irene W.....Collis P. Huntington Mem. Hosp., Boston, Mass.
 Masse, Elizabeth.....Children's Hosp., Philadelphia, Pa.
 Matlick, Bertha.....Hill Crest Hosp., Minneapolis, Minn.
 Mauss, Bessie W.....General Hosp., Wellsville, N. Y.
 McArthur, Miss E. J.....General Hosp., Stratford, Ont.
 McCalmont, Miss M. G.....National Hosp. Bureau, New York City.
 McClarty, Edith A.....Glance Bay Gen. Hosp., Glance Bay, N. S.
 McConnell, Anastasia.....Roper Hosp., Charleston, S. C.
 McDelderry, Grace D.....Hackley Hosp., Muskegon, Mich.
 McGall, Miss Emma H.....House of St. Giles, Brooklyn, N. Y.
 McIntyre, M. Ellen.....United Hosp., Port Chester, N. S.
 McKenna, Mary C.....St. Francis Infirmary, Charleston, S. C.
 McKenna, Susanna.....Pine Camp Hosp., Brook Hill, Va.
 McLaren, Margaret.....Warren Emergency Hosp., Warren, Pa.
 McLoughlin, Mrs. Allie P.....Nebraska M. E. Hosp., Omaha, Neb.
 McRae, Alexander J.....Wilkesbarre City Hosp., Wilkesbarre, Pa.
 Messler, D. N.....Somerset Hosp., Somerville, N. J.
 Metcalfe, Rachel A.....Central Maine Gen. Hosp., Lewiston, Me.
 Mevis, Lyman.....Industrial Home for Crippled Children, Pittsburg, Pa.
 Middleton, May A.....Methodist Episcopal Hosp., Philadelphia, Pa.
 Miller, Elizabeth.....Dover Gen. Hosp., Dover, N. J.
 Miller, Elizabeth F.....Polyclinic Hosp., Philadelphia, Pa.
 Millman, Miss B. M.....Orange Mem. Hosp., Orange, N. J.
 Milne, Mrs. T.....Welland Co. Gen. Hosp., Welland, Ont. Can.
 Minahan, Elizabeth.....Wilhenford Hosp., Augusta, Ga.
 Mitchell, Dr. H. W.....State Hosp. for Insane, Warren, Pa.
 Mohler, Dr. Henry K.....Jefferson Hosp., Philadelphia, Pa.
 Moore, Dr. Frances W.....Sibley Mem. Hosp., Washington, D. C.
 Moore, Lucy M.....Knickerbocker Hosp., New York City.
 Morgan, Dr. Esther.....Hampton School for Nurses and Dixon Hosp., Hampton, Va.
 Morgan, Miss M. L.....Henrotin Mem. Hosp., Chicago, Ill.
 Morgart, Sara M.....Indiana Hospital, Indiana, Pa.
 Morris, Anna L.....White Haven Sanatorium, White Haven, Pa.
 Morrill, Walter.....Beth-El Hosp., Colorado Springs, Col.
 Moss, Dr. Harry J.....Hebrew Hosp., Baltimore, Md.
 Mossell, Dr. N. F.....Douglass Hosp., Philadelphia, Pa.
 Moulder, J. McLean.....Bethany Methodist Hosp., Kansas City, Kan.
 Mowers, Miss B. H.....N. P. Hosp., Tacoma, Wash.
 Moyer, Katharine A.....Pottstown Hosp., Pottstown, Pa.
 Mueller, Margaret T.....German Hosp., Jersey City, N. J.
 Mulhearn, Charles A.....Martins Ferry City Hosp., Martins Ferry, O.
 Murray, Dr. T. J.....Murray Hosp., Butte, Mont.
 Napier, Miss L. J.....City Hosp., Springfield, Ohio.
 Nealley, Dr. W. G.....Brooklyn Hosp., Brooklyn, N. Y.
 Neergaard, Chas. F.....Brooklyn Hosp., Brooklyn, N. Y.
 Nevins, Georgia M.....Garfield Mem. Hosp., Washington, D. C.
 Newman, Miss W. Maud.....Sewickley Valley Hosp., Sewickley, Pa.
 Nicholls, Mrs. O. E.....Macon Hosp., Macon, Ga.
 Nightingale, Elizabeth B.....Wesson Maternity Hosp., Springfield, Mass.
 Norris, James U.....N. Y. Polyclinic Medical School and Hosp., New York City.
 Northwood, Maud.....Lake View Hosp., Danville, Ill.
 Nutter, Ida A.....Franklin Hosp., Franklin, N. H.
 Oberg, C. Irene.....Sherman Hosp., Elgin, Ill.
 Oberholtzer, Angelina E.....Allentown Hosp., Allentown, Pa.
 O'Brien, Reuben.....Manhattan Eye, Ear and Throat Hosp., New York City.
 O'Hanlon, Dr. Geo.....Bellevue and Allied Hosp., New York City.
 Oliver, Elizabeth F.....Bridgeport Hosp., Bridgeport, Conn.
 Olson, G. W.....Swedish Hosp., Minneapolis, Minn.
 Oviatt, Grace.....Grace Hosp., Newton, Iowa.
 Packard, Loring B.....Brockton Hosp., Brockton, Mass.
 Page, Henry F.....German Hosp., Philadelphia, Pa.
 Parke, J. H. S.....Montreal Gen. Hosp., Montreal, Can.
 Parks, Alice L.....Cambria Steel Hosp., Johnstown, Pa.
 Parrish, Nelle F.....City Hosp., East Liverpool, Ohio.
 Pelton, Dr. O. L.....Sherman and St. Joseph's Hosps., Elgin, Ill.
 Peters, John M.....Rhode Island Hosp., Providence, R. I.
 Pevoto, Rev. D. R.....Baptist Sanatorium and Hosp., Houston, Tex.
 Phillips, Geo. E.....Detroit Municipal Hosp., Detroit, Mich.
 Pickup, Miss Fanny F.....Barre City Hosp., Barre, Vt.
 Pierson, Alice Elspeth.....Charity Hosp., Norristown, Pa.
 Pine, Emily.....Rufus S. Frost Gen. Hosp., Chelsea, Mass.
 Pingel, Bertha.....Passavant Hosp., Pittsburg, Pa.
 Pollock, H. M.....Massachusetts Homeopathic Hosp., Boston, Mass.
 Potts, Florence J.....Hosp. for Sick Children, Toronto, Can.
 Pound, Clara B.....Reid Memorial Hosp., Richmond, Ind.
 Pratt, Mason R.....University of Virginia Hosp., University, Va.
 Prinderville, K. M.....Jos. Lawrence Free Pub. Hosp., New London, Conn.
 Pringle, Dr. J. A.....St. Louis City Hosp., St. Louis, Mo.
 Pugh, N. Louise.....Middlesex Gen. Hosp., New Brunswick, N. J.
 Purvis, Joseph.....West Suburban Hosp., Oak Park, Ill.
 Ransom, John E.....Central Free Dispensary, Chicago, Ill.
 Raps, M. Emma.....Passavant Hosp., Pittsburg, Pa.
 Rea, Elizabeth E.....Hosp. of the Woman's Medical College of Pennsylvania, Philadelphia, Pa.
 Read, Charles O.....Memorial Hosp., Pawtucket, R. I.
 Reardon, Elizabeth A.....Ohio Valley Hospital, McKees Rocks, Pa.
 Reilly, Mrs. Gabrielle Ricci.....West Philadelphia Hosp. for Women, Philadelphia, Pa.
 Rhodes, M. D.....Owatonna City Hosp., Owatonna, Minn.
 Richardson, Dr. D. L.....Providence City Hosp., Providence, R. I.
 Ricketts, Henry E.....Essex County Hosp., Belleville, N. J.
 Riddle, Mary M.....Newton Hosp., Newton Lower Falls, Mass.
 Riley, Dr. Charles H.....Sheppard and Enoch Pratt Hosp., Baltimore, Md.
 Robbins, E. E.....Woman's Hosp. Assn., Batavia, N. Y.
 Robbins, E. Freeman.....Baptist Sanitarium and Hosp., Houston, Tex.
 Robertson, Donald M.....General Protestant Hosp., Ottawa, Can.
 Robertson, J. Ross.....Hospital for Sick Children, Toronto, Can.
 Robinson, Margaret J.....Jefferson County Hosp., Fairfield, Iowa.
 Roche, Elizabeth F.....Litchfield County Hosp., Winsted, Conn.
 Roelofs, Katharine T.....Stetson Hosp., Philadelphia, Pa.
 Rogers, Margaret.....Jewish Hospital, St. Louis, Mo.
 Ross, Renwick R.....Buffalo Gen. Hosp., Buffalo, N. Y.
 Rothrock, Mrs. Anna Ely.....Union Hosp., Fall River, Mass.
 Rothrock, Mary A.....Clearfield Hosp., Clearfield, Pa.
 Rowland, Henry A.....Riverdale Hosp., Toronto, Can.
 Royan, Joseph F.....Good Samaritan Hosp., Lexington, Ky.
 Rudi, Rev. Francis M.....Lutheran Hosp., St. Louis, Mo.
 Ruggles, Alice K.....Evanston Hosp. Assn., Evanston, Ill.
 Russell, Martha M.....Sloan Hosp., New York City.
 Ruth, Clara L.....Edgecombe Gen. Hosp., Tarboro, N. C.
 Sampson, Stella W.....Hosp. for the Women of Maryland, Baltimore, Md.
 Sawyer, C. E.....Sawyer Sanatorium, Marion, Ohio.
 Schaeffer, C. D.....Allentown Hosp., Allentown, Pa.
 Schill, Anna M.....Hurley Hosp., Flint, Mich.
 Schulz, Dr. F. M.....Milwaukee County Hosp., Wauwatosa, Wis.
 Schulze, Miss Anna L.....Faxton Hosp., Utica, N. Y.
 Scott, Kathleen.....Edward W. Sparrow Hosp., Lansing, Mich.
 Seabrook, Alice M.....Woman's Hosp., Philadelphia, Pa.
 Selden, Elizabeth.....Butterworth Hosp., Grand Rapids, Mich.
 Sexton, Lewis A.....Johns Hopkins Hosp., Baltimore, Md.
 Sharp, Sarah C.....Beth Israel Hospital, New York City.
 Shaw, Richard E.....Long Island College Hosp., Brooklyn, N. Y.
 Shepard, Ida Frances.....Mary Hitchcock Mem. Hosp., Hanover, N. H.
 Shifferstine, E. E.....State Hosp., Coaldale, Pa.
 Shutt, Dr. Cleveland H.....City Hosp., St. Louis, Mo.
 Simonont, Eva.....St. Timothy's Hosp., Philadelphia, Pa.
 Sinclair, Dr. G. W.....Winnipeg Gen. Hosp., Winnipeg, Can.
 Smith, Mrs. Charles A.....New Rochelle Hosp., New Rochelle, N. Y.
 Smith, Edward P.....Mercy Hosp., Baltimore, Md.
 Smith, J. M.....Muehlenberg Hosp., Plainfield, N. J.
 Smith, Marion E.....University Hosp., Philadelphia, Pa.
 Smith, Mary A.....York Hosp., York, Pa.
 Smith, Nina A.....Mary Fletcher Hosp., Burlington, Vt.
 Smith, Dr. Winford H.....Johns Hopkins Hosp., Baltimore, Md.
 Smylie, Margaret S.....Hamot Hosp., Erie, Pa.
 Snow, Dr. Wm. Freeman.....Am. Social Hygien. Assn., New York City.
 Somers, Dr. Lewis S.....Stetson Hosp., Philadelphia, Pa.
 Sona, Marie.....Easton Hosp., Easton, Pa.
 Soule, Edith L.....Children's Hosp., Portland, Me.
 Southworth, Harriet.....Levering Hosp., Hannibal, Mo.
 Spalding, Harry O.....Westboro State Hosp., Westboro, Mass.
 Stevens, Andrew F.....Douglass Hosp., Philadelphia, Pa.
 Stevens, Edward F.....N. E. Deaconess Hosp., Boston, Mass.
 Stewart, Annabel L.....Women's Homeo. Hosp., Philadelphia, Pa.
 Stewart, Helen T.....St. Christopher's Hosp., Brooklyn, N. Y.
 Stewart, Minnie O.....Home for Destitute Crippled Children, Chicago, Ill.
 Stokes, Lydia Webster.....Woman's Southern Homeo. Hosp., Philadelphia, Pa.
 Stone, Mary J.....Hackensack Hosp., Hackensack, N. J.
 Storek, Harriet D.....Buffalo Woman's Hosp., Buffalo, N. Y.
 Stover, Dr. Chas.....Amsterdam City Hosp., Amsterdam, N. Y.
 Strasser, C. Eugene.....Jewish Hosp., Brooklyn, N. Y.
 Surbray, Mary E.....Warren Hosp., Warren, Ohio.
 Sutherland, M. M.....Memorial Hosp., Pawtucket, R. I.
 Sutphin, Josephine H.....St. Christopher's Hosp. for Babies, Brooklyn, N. Y.
 Sutton, A. R.....Henry Phipps Institute, Philadelphia, Pa.
 Swarr, Mabel R.....House of the Holy Comforter, New York.
 Sweeney, Anna M.....Franklin Ave. Hosp., Greenfield, Mass.
 Test, Daniel D.....Pennsylvania Hosp., Philadelphia, Pa.
 Thatcher, Alice.....The Christ Hosp., Cincinnati, Ohio.
 Thomas, Martha G.....Chester County Hosp., West Chester, Pa.
 Thrasher, Mary E. L.....Robert B. Brigham Hosp., Boston, Mass.
 Tinsley, Esther J.....Pittston Hosp., Pittston, Pa.
 Tipping, A. B.....Touro Infirmary, New Orleans, La.
 Turner, Aleda H.....Homeopathic Hosp., Wilmington, Del.
 Turpin, Miss Mary B.....Columbia, S. C.
 Ubil, Miss S. Katharine.....Lewis Crozer Home for Incurables, Chester, Pa.
 Underhill, Samuel G.....Lynn Hosp., Lynn, Mass.
 Van Slyke, Elizabeth J.....Woman's Hosp., New York City.
 Van Vort, Miss R. Z.....The Stuart Circle Hosp., Richmond, Va.
 Vithdorfer, Alma M.....Allentown Hosp., Allentown, Pa.
 Wagner, Lucca K.....Homeopathic Medical and Surgical Hosp., Reading, Pa.
 Walker, Dr. E. F.....Providence Lying-In Hosp., Providence, R. I.
 Walker, Dr. Thomas.....General Public Hosp., St. John, N. B.
 Wallace, Margaret A.....Passaic Gen. Hosp., Passaic, N. J.
 Walsh, William H.....Children's Hosp. of Philadelphia, Philadelphia, Pa.
 Ward, J. F.....City Hosp., Memphis, Tenn.
 Warfield, Harry H.....University of Maryland Hosp., Baltimore, Md.

Warner, Dr. A. R.	Lakeside Hosp., Cleveland, Ohio.
Washburn, Dr. F. A.	Massachusetts Gen. Hosp., Boston, Mass.
Washburne, Ida.	Eastern Maine Gen. Hosp., Bangor, Me.
Weaver, Dr. T. K.	Charity Hosp., Norristown, Pa.
Weber, Dr. Geo. T.	Olney Sanitarium, Olney, Ill.
Weber, Jos. J.	New York Charities Aid Assn., New York City.
Weber, Katharine.	Olney Sanitarium, Olney, Ill.
Webster, H. E.	Royal Victoria Hosp., Montreal, Can.
Webster, R. P.	Day-Kimball Hosp., Putnam, Conn.
Weglener, W. J.	
Weiss, E. A.	Mercy Hosp., Pittsburg, Pa.
Weissinger, Louise M.	Jewish Hosp. Assn., Louisville, Ky.
West, Roberta M.	Philadelphia Hosp., for Contagious Diseases, Philadelphia, Pa.
Wetmore, Florence.	Glens Falls Hosp., Glens Falls, N. Y.
White, Arthur J.	Boston Consumptive Hosp., Mattapan, Mass.
White, Marchant B.	Riverdale Isolation Hosp., Toronto, Can.
White, Milford W.	White Hosp., Ravenna, Ohio.
Whiting, A. D.	Germantown Hosp., Philadelphia, Pa.
Wilkes, P. C.	Baptist Mem. Hosp., Memphis, Tenn.
Wilson, George W.	St. Luke's Home and Hosp., Utica, N. Y.
Wilson, Margaret S.	Orthopedic Hosp., Philadelphia, Pa.
Wilson, Robert J.	Dept. of Health, New York City.
Woodbury, Wiley E.	Hahnemann Hosp., New York City.
Woods, C. S.	Methodist Episcopal Hosp., Indianapolis, Ind.
Wright, Elizabeth W.	Rockford Hosp., Rockford, Ill.
Wright, Dr. Frederick L.	General Hosp. Agricultural and Industrial School, Industry, N. Y.
Wright, Howell.	Cleveland Hospital Council, Cleveland, O.
Xavier, Sister M.	St. Joseph's Hosp., Reading, Pa.
Yingst, Edith E.	Carlisle Hosp., Carlisle, Pa.
Young, Beverly.	Southwestern Insane Asylum, San Antonio, Tex.
Young, Charles H.	Presbyterian Hosp., New York City.
Younglove, Anna.	Elyria Mem. Hosp., Elyria, Ohio.
Zulick, Thomas C.	Easton Hosp., Easton, Pa.

Dr. Ross' Report—Development of the Association¹

BY DR. R. R. ROSS, Chairman of the Committee.

As chairman of the Committee on the Development of the Association, I have the honor of reading its report of how to make this body of men and women more useful to itself. It is the very task that your presidents, officers, and committees have been trying to solve for the last fifteen years. To be frank with you, it is not so easy as it seems. To make an improvement is an impossible thing to do unless the members want an improvement and each is willing to do the part assigned him. Members have been too willing to sit and listen, or to even just sit, and let others do the work. Grover Cleveland was once complimented on what was supposed to be an extemporaneous after-dinner speech; but, said Mr. Cleveland, "There was nothing extemporaneous about it. I spent several evenings preparing that speech." Each one can, by burning the candle a little lower, contribute something worthy of his efforts and of interest to the association. There has been a too willing spirit to receive and a too great reluctance to give.

We come from localities widely scattered. Our problems, our difficulties, and our associations are widely different. We can at least unite on fundamentals. Each one must work out the details to meet his own needs and conditions. We do not believe that it is possible to determine every detail of hospital work and formulate a definite rule or plan for it. Were it so, the individual initiative would be destroyed and we would cease to be creative men and women. During the time we have been established as an association much has been accomplished—many an inspiration given to the beginner and to those on whom the burden of their work has heavily borne.

The functions of a modern hospital have greatly multiplied in the past fifteen years. New departments have come into existence which were then unknown. To help us meet these new conditions, and to determine how best to utilize them, should be one of the aims of these meetings. For the past few years there has been a splitting up of the association into smaller units. Canada has

organized her own association, which is on a flourishing basis. The sisters' hospitals throughout the states have formed their organization. Members from various states have found it to their advantage to organize their own state bodies. The result of all this has been a lessening of the interest in the parent organization and a falling off in the attendance at its meetings. Let us be honest with ourselves, and try to see what this means. Has the formation of these various organizations anything to suggest to us? The members from the far West find it difficult, expensive, and often impossible to attend meetings held in the eastern states and Canada. Members from Canada and the East meet the same difficulties when the association holds its meetings in the western states. The result has been and is detrimental to the parent organization, if we are to judge of the success of each meeting by the members present. This same feature has been observed in the American Medical Association and other national or international organizations. A comparatively few receive the benefits in any one year.

We do not believe that the state associations are a move in the right direction. There is no good reason why there should be a division along state lines. In some states it is impossible to form or maintain a state organization, while in others a flourishing association can be maintained. To meet the objection of distance and to bring those of allied interests together, we beg to bring to your attention the possibility of forming subsidiary organizations which shall represent different sections of the country; these associations to be so grouped by states that their problems, their interests, and ambitions be as nearly alike as possible; these to hold their yearly meetings, and the year that the national association meets in any given section, that sectional meeting be omitted.

Something more should be done to interest the public in the work of hospitals. In paternalistic countries and for municipal and state institutions this is not so important; hospital support in these is assured without much thought of the individual interest of a community. The ideal thing would be to have our own publication, but until such time comes we think it wise to have some journal which we can regard in an official way. We, therefore, recommend that some journal be recognized as the official journal of the association.

For some years we have discussed the advisability of establishing a paid secretaryship. We recognize that to finance such a position has been the difficulty. We have, however, made about all the improvement we can expect to make until some determined effort is made along this line. In similar organizations the work is largely done by a secretary. There is a very definite limit to the work we can place on a voluntary or part-time paid officer. The secretary should be a physician, and young enough to feel that he has a thing to develop. On him should rest the responsibility of coordinating the work of the different branches previously recommended. He should be able to bring our association in closer touch with the various other public health associations, such as the American Medical Association, the American Association of Nursing, the Red Cross work, the National Association for the Control of Tuberculosis, and other organizations with which hospital workers should be familiar and with which they should be in touch. There is a vast fund of information unavailable for us at the present time because there is no proper classification. Something should be done so that we may have benefit of the results of the various hospital meetings and public health meetings other than our own. We know of no better plan than to have state cor-

¹Read before the eighteenth annual conference of the American Hospital Association, Philadelphia, September 26-29, 1916.

responding secretaries or section secretaries, whose duties it would be to keep the national secretary posted on all hospital matters, including plans for new buildings, etc., and to furnish such information as may be called for by the secretary. The hospital purchasing bureau would be of little use to its members without its secretary. We confidently believe that equal benefits would accrue to us with the proper officer at work. A canvass for membership could be more thoroughly instituted under his direction than we can expect from an unpaid officer.

We have done little other than hold these meetings for the benefit of the members of the association or for the hospitals represented. There is much of value which can be done. We should have an exchange or bureau consisting of a registry of every hospital in Canada and the United States; of the superintendents and assistant superintendents; of the superintendents of nurses and their assistants; of the matrons, the dietitians, the x-ray operators, etc., and know something of the reputation of each and the character of work they are doing. The bureau should know when vacancies occur in the positions held by these, and have a record of those capable and available to fill them. Were such a bureau established and properly conducted, it would be of great value to those hospitals seeking officers and to those seeking positions, and, we believe, produce a substantial income for the association, which could be applied toward the salary of a permanent secretary. We have taken ourselves too seriously in thinking that our work and meetings should be conducted along exclusive lines. The commercial exhibit is a move in the right direction. It gives an opportunity to see and study what is new in hospital equipment without going to the salesrooms of the manufacturer. It is nothing more than has for years been done by the American Medical Association and state medical associations.

We do not believe that the dropping out of members is due to any extent to the lack of interest in hospital work. Rather do we feel that with many it is a financial problem. When there are long distances to go, it is a serious financial demand on the income of some of the members. The reasons I have mentioned in the beginning of this article which influence the attendance at the meeting is another reason responsible for members dropping out. Does this organization cover too wide a field? Can the best interest of the hospitals and hospital workers be better served by smaller units? These are questions for some thought and study.

It is an established fact that for any organization of men and women to have a successful existence, it must have a definite purpose in view. Within the past two years changes of vast importance have taken place in our national and international affairs. There is almost a unanimity of feeling among the citizens of the United States that our nation should be adequately prepared in military and naval affairs. We hear much about industrial preparedness. Many of the country's ablest men are trying to coordinate our industrial life so that it will be available for our country in time of need. A field of constructive work has been presented to us in connection with all this. Our hospitals, at the present time, have no affiliation with the plans of preparedness. Should the time ever come when it is necessary for us to engage in a war, we would be called on for service along lines for which we are not organized or prepared. Is it not time that we give some thought to this matter? We could be of great service to our country at such a time of strain and distress. Two or three hospitals have taken up the matter with the proper officials and have made a beginning. We suggest that the

presiding officer appoint a committee to make a survey of this matter and report at the next meeting of the association—not only a plan for base hospitals, but whether it is feasible to work out some scheme in which all can cooperate.

What can we do to make these meetings more interesting and useful? We feel that our trouble is more one of omission than of commission. Those who have had the responsibility of preparing programs know full well the great difficulty of securing papers from the members. We have already said that there is too great a spirit of letting a few do the work. Until this is changed we cannot hope for much improvement or progress. We are at a loss to suggest any improvement on papers to be read here. We do not see how the program for this meeting could have been greatly improved—the subjects are intensely practical and in every way interesting. It is difficult to find new subjects each year on which we can display our literary and oratorical talents. It is hardly possible to write a paper which does not infringe on something which has been said or written. This is as true of conventions along other lines as it is of this one. We are for the most part dealing with concrete problems in our daily life. We have ideas which we would like to develop, but, after working them out in our own minds and considering the costs, we have to consign them to oblivion. Few of us have sufficient funds at hand so that we can indulge in the advanced ideas before they are thoroughly tried out. The fact, however, remains that a very large percentage are fettered by financial difficulties. If this be true, we must then try to conduct these meetings so that they will give help to those most needing it; so that they will help to elevate hospital work and practice in general. We can build our temples with spires reaching into the clouds, but it is on the ground floor that we must worship. It is an inspiration to hear a paper on a subject utopian in character, but does it help to solve the problem of those we are trying to get to come to these meetings? We venture that a very interesting session could be held on the subject of practical utilities in machinery to replace help—a problem which has annoyed us all during the past year. This is an age of machinery, and many things are adaptable to hospital uses. Insurance for employees in hospitals is quite generally practiced in England. We are yet unaware of it being taken up by American hospitals, except in a few of those for mental diseases. We believe that the subject is worthy of study to determine whether it is applicable to general hospitals.

In many hospitals there is a lack of proper coordination among the various departments. The time is here when no man can live his life unto himself alone. He must come in touch with his fellow, whether or not he wills it so. Those interested in the professional side of the work, the doctors and nurses, know little and often care little about financial affairs or the difficulties the matron is having with employees. The help feel that they are only to do the hard and unpleasant things, and care little about reducing waste or giving good service. Often the medical profession is not interested in what the superintendent of nurses is trying to accomplish along educational lines and higher standards for her pupils. The result of it all is a lack of proper team-work. Can anything be done or said which will enable members, after attending these meetings, to go to their respective hospitals with a spirit to try to get a more harmonious action with their people?

We have suggested enough along these lines to give you an idea of our trend of thought. Do not understand that we deprecate the theoretical papers; we recognize their

value and their place. We do want to make it plain that the vast majority who come here need all the assistance we can give them in advising them how to handle their domestic, their professional, and their financial problems with the resources at their command. Finally, we urge on the new members present, and on those who have not cultivated it, the value of friendship. The quiet talks with those working along similar lines are, many times, quite as valuable as the papers read. The friendships formed often become enduring ones and a pleasure to us in our later years.

The Open Hospital—A Factor in Preventive Medicine¹

BY WARREN L. BABCOCK, M. D.,
Superintendent the Grace Hospital, Detroit, Mich.

It was with much hesitation and diffidence that I consented to prepare a paper on the subject of the Open Hospital. It occurred to me after some consideration that the open hospital, so-called, as organized and managed in the West, is a much misunderstood institution, especially on the part of our eastern hospital brethren. One or two of my eastern friends, who have spent a hospital life in closed hospitals, have thrown up their hands in horror when informed that many, if not most, of the hospitals west of Buffalo were open to the practice of any qualified and registered physician. With your consent, I shall limit my discussion to the open hospital as a factor in preventive medicine.

There are really three classes of hospitals to be considered in this study—the closed hospital, the restricted hospital, and the open hospital. The closed hospital, of which we have many examples in the East, restricts its medical and surgical work to its resident or attending staff; the restricted hospital limits outside physicians to certain accommodations, possibly private rooms only; while the open hospital, with or without an attending staff, usually receives patients for treatment under the care of any registered physician of good standing and proved competency.

We recognize that the closed hospital has a field and a mission of its own. Questions of teaching policy and control properly require that it be administered by the teaching element. Medical schools have diminished in number during the past decade, and the number of hospitals affiliated with teaching institutions have relatively decreased. A careful estimate shows that about 20 percent of the hospitals of the country participate directly or indirectly in the undergraduate teaching of medicine. The 80 percent are represented largely by the open or restricted hospital.

The principal arguments in favor of the closed hospital center about the patient. Those in favor of the open hospital center about the medical profession as a whole, the hospital exerting its influence as an educational factor in keeping the physician familiar with the advances in medicine and surgery and up to date in treatment, methods, and technic. Let it be understood that these are only main arguments in either case. The argument that the open hospital more greatly benefits the profession at large can be amplified to include the public, and including the public, ultimately, of course, includes the individual who is sick and the recipient of hospital care.

If we are to consider only the individual who is ill at the present moment, the closed hospital offers the greatest potential possibilities per se; but if we are to consider more broadly the greatest good to the greatest number,

the advancement of the medical profession as a whole instead of the preferment of selected members, the advance of preventive medicine and the care of the masses of the future, we realize that herein lies great reason for the continued existence of the open hospital. The open hospital, therefore, stands unconsciously in the position of a post-graduate school for the medical profession. In other words, it is practically the only means by which the physician or specialist at large can obtain his scientific discipline.

The announcement of the regents of the American College of Surgeons, recently issued, entitled, "A Tentative Outline of Study of Clinical Training of Physicians and Surgeons After Graduation," contains the following extract:

"In the making of a physician or of a surgeon today, there comes between graduation from the medical school and the independent practice of medicine or surgery a period of clinical training. This training, both by public opinion and by the profession itself, is now generally considered a necessary enactment of those who would enter practice. But both the general public and the profession are still in a twilight haze as to what should constitute this training. Ideals in the matter differ widely among the various sections of the country. * * * Scientific discipline in the actual treatment of disease and injury is, of course, the basis of the high standard sought. * * * The larger hospitals, obviously, are the centers for this discipline. The vast teaching responsibility devolves on them, and any genuine effort to study the full scope of medical education leads to analysis, not only of what the larger hospitals are doing in the way of instruction in medicine, but also of the ideals which guide their teaching. * * * It is the hope of the regents of the college, further, that this report will make for a closer bond between the practicing profession and the hospitals as teaching institutions. With few exceptions, however, interns, assistants, and occasional practitioners are the groups affected by the graduate teaching of hospitals. And, however effective this teaching may be, it does not mark the full educational usefulness of hospitals, for it does not serve the need of the great mass of busy practitioners. Education in medicine is never finished, and the large majority of those in the profession desire to keep pace with the science of medicine; but only in scattered instances are the facilities for such progress practically within the reach of these men."

In plain language, the regents of the American College of Surgeons point out that the present facilities for post-graduate teaching are limited in scope, and can serve only a fraction of the profession, probably less than 1 percent. Indeed, the American College of Surgeons exists for the purpose of elevating and standardizing the practice of surgery. Any surgeon who meets its requirements is eligible to membership in the college. The professional opportunities and influences centered in our hospitals should be used to elevate and standardize the whole profession, instead of building up, by preferment, a professional class or caste. Do not misunderstand me to insist that every graduate in medicine should have opportunities for hospital practice. Any open hospital can adopt standards and rules which will exclude from practice any physician who is incompetent or unfitted to practice therein. The preliminary educational or professional training of the physician should not be the criterion by which he is admitted or excluded from the hospital. Many of our greatest and some of our most recent leaders in the profession have been graduates of class B and class C schools. We all know, and most of us are ready to acknowledge, that native talent and ability, properly led and directed, attain heights seldom reached by all the graduates of our most advanced medical schools. Without conscious effort, the open hospital offers continuous post-graduate instruction to the element of the medical profession most in need of practical, scientific training. The announcement of the regents of the American College of Surgeons points the way even more definitely than the quotations which I have just given.

¹Read at the eighteenth annual conference of the American Hospital Association, Philadelphia, September 26-29, 1916.

In another section of their announcement will be found the following:

"In many a community there is a hospital well equipped with laboratories and other facilities for medical diagnosis. Here are men, also, competent to use the equipment and to teach others how to use it; and yet access to these facilities is restricted to members of the hospital staff. The earnest practitioner in the vicinity who is not on the staff finds the hospital doors closed to him. Naturally, he comes to look on the hospital, not in any way as a source of help or of inspiration, but rather as an unfair advantage in the control of his rival practitioners."

Concretely, therefore, we have had pointed out to us that which I choose to consider the second most important function of a hospital—the first and foremost, the care of the sick; and the second, the education of the profession. The entire medical profession should have opportunities to participate in the highest professional endeavor within their reach or within their community.

DEVELOPMENT OF THE OPEN HOSPITAL

Possibly 80 percent or more of the hospitals of the country are open or restricted hospitals. If we trace the origin, growth, and development of hospitals, we shall find an explanation for the existence of the open hospital. It is to be here acknowledged that the altruistic purpose of past education of the medical profession has not entered into the origin of the open hospital, but it stands today as a good reason for its continued existence. When a community reaches a population of five, ten, or twenty-five thousand, the civic or municipal spirit of the lay public and the professional needs of the medical profession mutually agree that the town requires hospital facilities. In the beginning the organization of a hospital, in most instances, is in the hands of a group of physicians whose efforts are assisted or augmented by public committees, usually composed of leading citizens. Money is raised, a hospital built, and some organization perfected. In a sense, it is a community hospital, receiving patients from the city and surrounding country, and is usually supported by all the physicians of the community. In the beginning all qualified and registered physicians are equal, and there at once commences, or should develop, a process of elimination of the physicians unfitted by character, personality, and temperament for hospital practice. Take note that I do not consider the educational factor or lack of training a sufficient cause for their elimination—their practical education will come later. The community hospital is at first without endowment funds, and must have universal and liberal support from the entire profession in order to exist; hence its by-laws provide that any qualified and registered physician may send private patients to the institution for care in its wards or private rooms. In a few years the hospital may receive an endowment. The extent of the charity work carried on depends entirely on the size of the endowments, and usually increases with the age of the hospital. At its organization an attending staff may or may not be formed; if not at its foundation, such a staff is usually formed after a few years, when a more centralized interest develops, which in many instances tends toward restriction of certain hospital privileges. Closer scrutiny of the character of work performed by physicians who have the privilege of using the hospital develops; later the wards of the hospital are closed to all but staff members, the private rooms still being open to the profession. In the open hospital the only prerogative of the attending staff over the other members of the profession is usually the care and treatment of the free and charity cases and the nurses and employees. In the restricted hospital the prerogatives of the

attending staff are as stated for the open hospital, plus the use of ward beds for their private as well as staff patients. It has not come to my notice that the hospital which has reached this stage of development recently has further restricted its privileges so as to entirely exclude all members of the profession other than its staff. Undoubtedly such instances have occurred, especially in the case of hospitals that have been joined to teaching institutions, as college or university hospitals.

At least 75 percent of the hospitals of the country are less than fifty years of age. The cycle of passing from a wide-open institution to a restricted hospital may cover a varying period of years. Hospitals founded within the last few decades will be found to have a shorter cycle from the open to the restricted institution. Up to the present time the endowment funds of the great majority of the hospitals of the country are not sufficiently large to permit of the maintenance of the institution without the patronage of private patients, which patronage naturally has its source in the profession as a whole, rather than a few medical men. The elements, therefore, that permit of advance toward restricted privileges are as follows:

First, the increase of endowment funds, which carry with them centralized professional influence.

Second, the building and organization of other hospitals in the community, thereby dividing the professional influence.

Third, an affiliation with colleges or universities as a teaching institution under their control.

Fourth, the development within the hospital of a strong group of physicians and surgeons, whose training and influence tend to professional segregation.

In this discussion we shall consider the small private hospital organized by a limited group of physicians. These are generally surgical or special hospitals conducted for convenience and profit, without endowment, and having no centralized public, professional, or civic backing. These institutions offer a place of vantage to the strongest or most active physicians in the community. As the community develops, these small hospitals are sometimes taken over by a hospital board or commission organized by the influential citizens of the community, who raise funds for their enlargement or endowment and open the institution to the entire profession.

The open hospital, therefore, at its birth seems to be a child of the frontier, dependent on the universal patronage of the community, and is as much a public necessity as the village bank or railway station. It must necessarily exist as an open hospital, receiving the patronage of the entire profession until such time as endowments provide an income with which it can be operated as a restricted hospital.

The open hospital, in order to justify its existence, must discriminate between the competent and the incompetent physicians who patronize it. Efficiency in professional work is a relative term, and it is rather difficult to classify physicians on this score. The physician should be given the benefit of a doubt until he manifests absolute incompetency, lack of progressiveness, unwonted carelessness, or indifference. The treatment, methods, and technic of physicians practicing in open hospitals should be studied, and the personal equation of the man estimated as far as possible. In order to do this, the superintendent of an open hospital should be a medical man of discrimination and judgment. In the smaller hospitals, which are usually in charge of women superintendents, a small committee of the medical staff should scrutinize the work of the out-

siders. Unfortunately, personal prejudice and bias too often play a part and lead to many professional jealousies. The discriminating medical superintendent, clothed with ample power by his board of trustees, is in a better position to estimate the character of work of the outside physician.

It has long been understood that the very poor and the very rich are able to obtain the highest grade of medical and surgical service, and that the great middle class have to go to the bargain counter. They have to bargain for their doctor or surgeon in the same manner that they shop in a department store. As a result, the untrained, defectively educated element in the medical profession waxes prosperous, and is always busy with a practice made possible by the splitting of fees or the trading of patients with specialists. These physicians are not naturally unscrupulous, but have followed the line of least resistance in obtaining their practice. How much better it would be for the hospitals of the country to encourage the recent graduate in an affiliation with a hospital that will ultimately be the means of elevating his plane of practice. Certainly the environment of any physician or surgeon who has entree to a hospital is far more conducive to higher grades of work, to progress in methods and technic, and to absorption of new methods and new ideas of colleagues with whom he is rubbing elbows. This phase of post-graduate medical education has attracted the attention of some of the leading educators of the country. The address of Dr. Henry S. Pritchett, president of the Carnegie Foundation, delivered at the opening of the new Cincinnati General Hospital, February 20, 1915, entitled, "Democracy and Medical Education," is largely a plea for greater and broader opportunities for the entire profession, rather than the preferment of individual members.

He reminded the Cincinnati community that the restriction of hospital privileges to a few inevitably leads to the efficiency of the few and the inefficiency of the many. He pointed out that, even though the efficient few have a large practice, the bulk of the medical work is, after all, done by the many of the profession, and, if the many lack proficiency or opportunities for progress, the services they render are successful in proportion to their opportunities for gain or increase in efficiency. The public, therefore, frequently and unnecessarily receive poor service, with all the destructive consequences that follow, because the family doctor is denied admittance to the hospital that the citizens and the doctor both help support.

"Generally, the practitioner had to get his experience at the expense of his patients, and, in spite of the noble successes that have come out of the old methods, the great wrong to the public lay in the fact that, to produce a small number of great physicians and surgeons, a vast horde of unqualified medical men were turned into the profession to earn their living as best they might."

Dr. Flexner's report on medical education in the United States was the means of awakening the medical profession to the value of improved theoretical and practical training in medicine. We need a survey and standardization of our hospitals to awaken the profession to the value of hospitals as continuous post-graduate teaching schools.

The registration and licensing of physicians by state boards is the result of a mental test of their knowledge of theoretical medicine. How often we see incompetent medical men in practice who have taken high standing in state board examinations. Passing their state board, they enter the practice of medicine absolutely free from mentor, coach, or critic, and in general practice bury the victims of their incompetency, neglect, or carelessness, free from public or professional knowledge or criticism.

The rapidly diminishing numbers of medical colleges and the contraction of centers of medical education to a few large cities throw a greater responsibility on the non-teaching hospitals of the country, which represent nearly 90 percent of the total.

In the open hospital the outside physician comes in daily contact with the members of the attending staff, who are usually the most progressive members of the profession in the community; he rubs elbows with the youngest members of the profession, represented by the resident intern staff, and he witnesses the modern methods of nursing in hospitals. The hospital atmosphere and environment place him decidedly on his metal, tend to bring forth his best work, and stimulate a conscious pride in achievement. I have known not one, but scores of medical men, often graduates of class C medical schools, permitted to practice in open hospitals, learn and observe from the attending medical staff most of their practical medicine. I have seen these physicians, endowed with native talent and capacity, advance and progress until they lead their profession in the community or in their work or specialty. There is no factor more potent in submerging the scientific spirit than the harassing demands and details of general practice, and the general practitioner needs the hospital stimulus. It need not be emphasized that the practice of outsiders in open hospitals be watched, their work supervised and augmented by aid and instruction, and checked with the standards of the attending medical staff. It is even necessary now and then to exclude, after due observation, physicians who are hopelessly inefficient and unprogressive. By this means, and scarcely in any other manner, is a practical classification of professional efficiency possible in an isolated community, a classification at once known to the profession and even to the laity. Certainly the physician who demonstrates his incompetency after practice in a hospital is a marked man and less potent for harmfulness in the community.

In the large cities, branch hospitals, in localities not provided with hospital facilities, built, organized, and controlled by the main hospital, offer great possibility for community service. A limited experience with branch hospitals has demonstrated the early development of community interest, both financial and social in character. If the branch hospital is open to the practice of the general profession, a marked stimulation and advancement in methods of professional practice may be noted. The branch hospital should be completely organized and equipped as a general branch, with all major departments represented. It can be administered at a less per capita cost than the main hospital, owing to the fact that some overhead expenses of a supervisory character can be distributed between the branch and the main hospital. The organization of an attending staff comprising the leading physicians of the branch locality will widen local professional interest and enable a few qualified medical men to participate officially in the work of the hospital.

The establishment of a fifth hospital intern year as a prerequisite for state license in all states would soon bring about a wider desire in the profession for permanent hospital affiliation. It has been my experience to observe that the young medical man with a practical hospital training attempts to secure permanent hospital affiliation early in his professional career.

The American Hospital Association should take a decided and definite stand on the subjects of hospital standardization and the fifth intern year. It can scarcely be questioned that both these problems stand as progressive hospital policies. We need a Carnegie Foundation and a

Flexner to point the way. When our hospitals are once standardized and have a unity of method and purpose in teaching, the terms "closed," "restricted," and "open" as applied to hospitals will no longer be used.

WEST VIRGINIA HOSPITALS MEET

Convention at Huntington Has Fine Program and Good Time—Hospitals Have Rosy Outlook

The annual meeting of the West Virginia Hospital Association took place at Huntington on October 11, and those who attended got the impression that a really worthwhile hospital movement had been set afoot that promised far better conditions in the hospitals of the state.

Sixty-five hospitals of the state were represented. There were three sessions—morning, afternoon, and evening. The evening session was under the auspices of the Cabell County Medical Society, which also gave a dinner to the members of the association at Hotel Frederick. Following the dinner, addresses were made as follows: "The Duty of a Physician to the Hospital," by Dr. G. C. Schoolfield; "The Duty of the Hospital to the Physician," by Mr. Pliny O. Clark; and "The Duty of the Community to the Hospital," by Mr. C. P. Snow, president of the Chamber of Commerce of Huntington.

The programs of the morning and afternoon sessions were as follows:

Invocation, Rev. Newton Donaldson, D. D., Huntington; address of welcome, Mr. C. P. Snow, president Chamber of Commerce, Huntington; address by the president, Dr. G. C. Schoolfield, Charleston; address, "The Purchasing of Supplies," Dr. E. H. Thompson, Bluefield; report of the American Hospital Association, Pliny O. Clark, Wheeling. Discussion.

AFTERNOON SESSION

Address, "The Commercializing of the Pupil Nurse," Miss Emily Bauer, superintendent C. and O. Hospital, Huntington; address, "Short Sketch of the History of Hospitals and Trained Nurses of West Virginia," Dr. A. K. Kessler, Huntington.

There was considerable discussion, and then the presentation of recommendations from the State Graduate Nurses' Association by Mrs. Susan Cook, president of that association.

Report of the Membership and Auditing Committee. Report of the Committee on Legislation and School for Nurses. Report of the Secretary and Treasurer. Report of Nominating Committee.

The election of officers resulted in the following choice: president, Dr. Wm. A. McMillan, McMillan Hospital, Charleston; first vice-president, Dr. Chas. H. Wingerter, Wheeling; second vice-president, Dr. J. A. Guthrie, Guthrie Hospital, Huntington; third vice-president, Mrs. Geo. Lounsbury, Charleston; secretary and treasurer, Dr. W. H. St. Clair, Bluefield.

Time and place of next meeting, October, 1917, at Fairmont, W. Va., at Hotel Fairmont.

The Hospital's Liability for a Patient's Child

An infant child of a patient in a hospital was fatally injured through coming in contact with a steam pipe in the hospital while the mother was under treatment there. Asserting that the accident was attributable to negligence of those in charge of the premises, the child's administrator brought suit for damages. Defendant hospital sought to secure summary dismissal of the suit on the ground that the complaint failed to state a right of action, but the Supreme Court of Westchester county, New York, has refused to dismiss the claim on defendant's demurrer, thus leaving the case to be tried by jury. (Roche vs. St. John's Riverside Hospital, 160 New York Supplement, 401.) Summarized, the principal points of law ruled by the court are as follows:

A hospital, although not legally bound to receive into its custody the infant child of a patient, on doing so, is

legally bound to use a reasonable degree of care to prevent injury to the child, whether the service is rendered gratuitously or otherwise. For breach of this duty there is liability for damages resulting as a direct consequence. Hence, if plaintiff can prove in this case that the hospital attendants carelessly permitted the deceased child to come in contact with the steam pipe, whereas the exercise of reasonable care under the particular circumstances would have avoided the accident, there is liability.

TO DISCUSS SOCIAL HYGIENE

National Association Meets in St. Louis—Men of National Fame to Participate

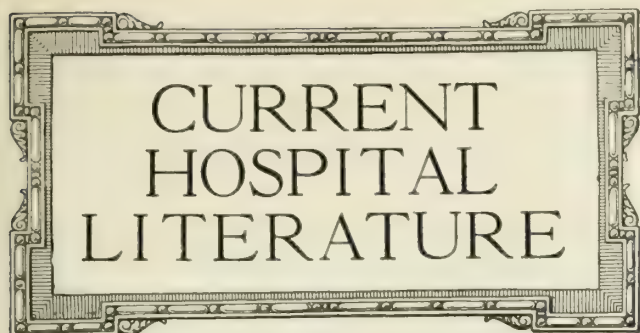
St. Louis is, in a sense, the birthplace of the American Social Hygiene Association. In this city a number of years ago the American Federation for Sex Hygiene was organized. The American Vigilance Association, organized in Chicago, and the American Federation for Sex Hygiene merged, forming a great national organization under the name of the American Social Hygiene Association.

On November 20 and 21, 1916, the American Social Hygiene Association will hold its annual meeting in St. Louis. Many of the most prominent leaders in social hygiene work will be present, and will address public meetings on various phases of social hygiene. Among the notable leaders who will participate in the program are: Dr. Abram W. Harris, president of the American Social Hygiene Association; Mr. Jerome D. Greene, of the Rockefeller Foundation; Dr. William F. Snow, general secretary of the American Social Hygiene Association; Dr. J. N. Hurty, commissioner of health of Indiana; Dr. S. J. Crumrine, commissioner of Health of Kansas; Dean Herbert L. Willet, of the University of Chicago; Dr. W. A. Evans, of the *Chicago Tribune*; Dr. William A. Pusey, of the School of Medicine of the University of Illinois; Attorney General George Cosson, of Iowa; Dr. George R. Dodson, president of the St. Louis Social Hygiene Society; Mr. J. Lionberger Davis, chairman of the Committee of One Hundred, St. Louis; Mr. Percy Werner, St. Louis, member of the board of directors of the American Social Hygiene Association; Mr. Samuel P. Thrasher, of the Committee of Fifteen, Chicago, and numerous other of the most prominent leaders in the social hygiene field.

The public health and law enforcement aspects of social hygiene will be thoroughly discussed, and the problems analyzed and threshed out in the various public meetings. A group of prominent citizens of St. Louis, headed by Dr. George R. Dodson, Mr. J. Lionberger Davis, and Mr. Percy Werner, are making the local arrangements for the national meeting. Programs and other information can be secured from the Central States Division office of the American Social Hygiene Association, 122 South Michigan Boulevard, Chicago, Ill.

Crime Cured by Surgery

In Chicago during the past month judges in the correction courts have given the option to two aged perverts to submit to sterilization or go to the penitentiary. Formerly these aged men would have been hanged or imprisoned for rape. They were both senile and were beyond self-control. In both cases sterilization was chosen. One of the men was a most pathetic figure. Both he and his family realize his condition, and the old man seemed to be grateful that the law had pointed out the remedy.



CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature,
Army Medical Museum and Library, Office of the Surgeon-General,
United States Army.

Economical Treatment of the Tubercular Patients in the Temporary Hospitals (*Traitement économique des tuberculeux dans les hôpitaux temporaires*). Dr. de Fleury, *Bull. Acad. de médecine, Paris, 1916, LXXV, No. 8.*

One of the most common diseases among the soldiers during the modern trench war is tuberculosis. It is one of the problems with which the medical services of all the belligerent countries have to contend. The author, who was in charge of a military hospital on the northern coast of France, devised a method of treatment which was very successful. From the start he isolated the tubercular soldiers from the other patients, placing them in buildings with southern exposure. He then had a large shed, 30 meters long and 2.20 meters deep, erected. This shed was located near the hospital on sandy ground, and was tightly closed on the north, west, and east, and open on the south. A number of cots were placed in this shed, on which the patients were exposed during the whole day to the warm rays of the sun, only the head being protected. The author warmly recommends this mode of treatment, which is not only accompanied by great success, but is also very economical.

Raw Versus Boiled Milk. Ed. *Journal of the Amer. Med. Ass'n, 1916, LXVII, No. 6.*

Dr. Janet E. Lane-Clayton has just issued a work under the authority of the Medical Research Committee of the national insurance act. Her conclusions are in favor of boiling, though she is unable entirely to exclude disadvantages. She is inclined to discount any vitalistic theory of the efficiency of natural milk as a constructive in infant feeding. She admits, however, that milk contains substances of unknown composition essential for life when milk is the sole diet. But she considers that there is no evidence to show that these substances are destroyed by boiling, especially when the heat is not applied for prolonged periods and when a temperature not exceeding the boiling point is used. The loss of vitamin, she says, if it occurs, is evidently not sufficient to affect the nutritive value of milk.

The Problem of Tuberculosis Sanatoriums (*Die Sanatorienfrage*). Dr. M. Holmboe. *Zeitschrift f. Tuberk., Leipzig, 1916, XXV, No. 3.*

The author first gives a retrospect on the development of the hospitalization of tuberculous patients, with especial reference to Germany and the Scandinavian countries. At first sanatoriums were established only for patients in the initial stage of tuberculosis, but this was soon found to be insufficient. Something had to be done for the more

advanced as well as for the incurable cases. In solving this problem, two views predominated. One side demanded that separate sanatoriums should be established for curable patients, while the other maintained that a separation of the curable and advanced cases was not necessary. The latter view prevailed to some extent in Sweden, while in Germany, Denmark, and Norway almost throughout separate institutions were established. The author is a warm defender of this system. At the close he considers the question of the most suitable size of tuberculosis sanatoriums. The International Association for the Prevention of Tuberculosis recommends 100 beds as the normal size, and places the maximum at 200 and the minimum at 60 beds. The author is of opinion that a sanatorium should not be so large that the medical director cannot follow the condition of each individual patient. In institutions of more than 60 beds he considers an assistant physician necessary.

The World's First Hospital Ship. Waldon Fawcett. *The Nurse, 1916, V, No. 3.*

A ship designed and constructed expressly for use as a hospital ship is the ambition of the officers of the United States navy. This vessel, when completed, will rank not only as a model floating hospital, but as the first craft especially constructed for use as a military or naval hospital ship.

The action of the United States in planning for a special hospital ship, a floating hospital, has not been due in any measure to the object lessons of the present war. Long before the outbreak of the conflict in Europe the experts of the United States Navy Department made plans for the pioneer hospital ship, and Congress at its last session was nearly ready to appropriate the sum of \$2,250,000 for the work of construction.

The Mobile Surgical Hospitals (*Gli ospedali chirurgici mobili*). Dr. B. Rossi. *Ospedale Maggiore, Milano, 1916, IV, No. 5.*

As the present war has revolutionized the methods of warfare, the army medical service of all countries also underwent far-reaching changes. If we consider that during the twelve days of the battle of Ypres, 100,000 German wounded passed through the railroad station at Brussels, and that after the battle on the Marne the French medical service had to take care of 112,000 wounded, we get an idea of the enormous demands made on the field hospital service of a modern army.

The wounds from high explosive shells, shrapnels, and other arms are so much more serious than formerly, and the mortality with the old conservative methods of treatment is so great, that the question of immediate surgical intervention in all cases of lesions of the cranial, thoracic, and abdominal cavities at once arose. From statistics the French surgeon Abadie established the fact that in wounds of the abdomen a far greater number of patients can be saved by an immediate laparotomy than by the old conservative methods. Provisions were made in all armies to enable the surgeons to perform operations immediately behind the front and as early as possible after the wound is inflicted. To attain this same end, the medical department of the Italian army has organized movable surgical hospitals, which can be mounted and dismounted in a few hours and carried by automobiles wherever they are needed.

Such a hospital consists of, 1, an operating house, 4x6 meters (barrack tent, as the author calls it), having four walls of wood, with windows all around and covered

throughout with impermeable tent cloth; 2, a tent 8 meters long and 5 meters wide, divided into three compartments for the preparation of the patient, disinfection of the surgeons, and sterilization of the material; 3, a hospital tent for the patients; 4, a pharmacy tent; 5, a tent for the hospital stewards and one for the officers; 6, an x-ray tent; 7, an isolation tent for infected patients. The whole hospital can be set up for immediate use in four hours, and is carried from place to place by eight specially constructed automobiles.

The Function of the Pathological Laboratory in the State Hospital Service. William J. Tiffany, M. D. *State Hospital Quarterly*, 1916, I, No. 4.

The laboratory may be made the medium through which to call the attention of the clinicians "to the nonpsychological clinical medicine and to raise the standards of work on the somatic conditions. In the autopsy material and in the laboratory methods the somatic issues come to the front; hence their paramount importance for a practical balance in our system of controls."

The manner in which the pathological material is presented to the staff is of the greatest importance. There is no better way than to have the physicians who have worked up the cases clinically attend the autopsies. They should bring with them to the autopsy a complete summary of all the physical findings and other clinical facts. A pathologist cannot be expected to furnish an explanation for a certain symptom unless he is given some idea of what he should search for.

The custom of waiting for a patient to die before making any request for a post-mortem examination is responsible for a loss of many autopsies. A little tact in presenting the proper argument to the relatives will prevent many curt refusals. The argument that the relatives should know exactly, not only the cause of death, but also the incidental diseases of every member of their families, appeals to most intelligent people. When they understand the benefit that they themselves may obtain from such an examination, they are often eager to consent.

The laboratory equipment and force should be such that any modern diagnostic test may be undertaken, and all new methods of clinical diagnosis given a careful trial. Our present-day knowledge of medicine is largely the result of post-mortem examinations of cadavers, and, if our standards are to advance in the future, more attention must be directed to this important subject.

The Average Cost of Hospitals and the Standards of Hospital Construction in Italy (Del prezzo unitario degli ospedali e dei criteri per il prezzo degli ospedali italiani). Dr. Bertarelli. *Rivista di ingegneria san.*, Milano, 1916, XII, No. 9.

The author says that whenever a hospital is to be built in Italy, limits are placed on the cost of construction in the advertisements for competitive bids. Recently for a hospital of 650 beds to be erected in Parma the costs were limited to 3,000,000 francs, while such a hospital would in reality require an expense of more than 3,500,000 francs. The result is that such hospitals are lacking in the essential principles of modern hygiene. There are certain fundamental principles in modern hospital construction which can absolutely not be ignored, and, if there is not enough money on hand to build a hospital, it is better to wait until sufficient means have been collected. There are at present no hospitals in Europe which cost less than 10,000 francs (\$2,000) per bed. In Italy the expenses for a hospital rise rarely higher than 5,000 francs (\$1,000). It is,

of course, possible to keep the construction within the most modest limits, but it is always done at the expense of the necessary cubic space per bed. Such a hospital will soon prove itself technically insufficient. In such cases it is best to continue to use the old hospitals until sufficient means have accumulated to erect a perfect structure.

Report of Eighty-two Cultures Taken from Physicians' Clinical Thermometers. Walter R. Ramsey, M. D. *St. Paul Med. Jour.*, 1916, XVIII, No. 7.

Compared with the high standard of cleanliness set for other instruments and utensils used in the practice of medicine and surgery, the average clinical thermometer gets but scant attention. The care given a clinical thermometer varies much with different physicians. Many deem it sufficient to wash it in water either by stirring it in a glass or allowing water from the tap to run over it, after which it is sometimes dried and returned to the case, and sometimes returned without drying. Others, in addition to washing it more or less thoroughly in water, wipe it off with alcohol or some other antiseptic, such as carbolic acid, lysol, or whatever other antiseptic solution is available. In hospitals various methods of cleansing the thermometers are in vogue. The most common practice is to take them from a glass containing some solution, such as formalin, and, after using, return them to the solution. When there is a large number of patients in a ward, these thermometers are often used again without being thoroughly washed or allowed to remain for any length of time in the antiseptic solution. To demonstrate that more than ordinary washing is required to render clinical thermometers free from secretions after using, the following experiments were made: Six cultures were taken from thermometers directly after they were removed from the mouth, after first washing them in running water. Six cultures were taken from thermometers, after removing them from the mouth, after first washing them in running water and then rubbing them off with 95-percent alcohol. On the first series of six, Nos. 1, 2, 3, 4, and 5 gave cultures of various organisms, including staphylococci and large spore-forming bacilli. No. 6 was sterile. Of the second series of six, only one gave any culture, the remaining five being sterile. Five cultures were taken from thermometers after washing them thoroughly with running water with constant rubbing, and then washing them off thoroughly with sterile cotton wet with 95-percent alcohol. All these were sterile. Five cultures were taken from thermometers with a smooth surface (scale on the inside), which had been washed in running water with soap and then dried on a clean hand towel. Two of these gave cultures, one of staphylococcus albus, the other of a large diplococcus. From the foregoing experiments it is apparent that clinical thermometers are possible sources of infection, and that some safer method of rendering them clean than is generally in vogue should be employed. It has been demonstrated that careless washing will not suffice, but that thorough washing with running water and then alcohol will render them clean.

The F. Ponti Pavilion of Mechanotherapy (Il padiglione di meccanoterapia F. Ponti). Dr. P. Bossi. *Ospedale Maggiore*, Milano, 1916, IV, No. 3.

Milan is a great industrial city, and has a large population of workmen. In modern industrial establishments accidents are so frequent that a special institution for the treatment of injured workmen is of great importance. The pavilion for mechanotherapy of the Ospedale Maggiore in

Milan was erected in 1902, and is named after its benevolent founder. It is a one-story structure, and consists of a central building, with two large wings at each end standing at right angles to the main building. The ground plan has thus the forms of two T's whose bases meet. This is the form of all new pavilions of the Ospedale Maggiore.

The pavilion contains several divisions, in which the various affections resulting from industrial accidents are treated. There is a large hall containing gymnastic apparatus for the treatment of deviations of the spinal column; one room contains the Zander apparatus; there is a massage room, a room for light baths, four rooms for the treatment of traumatic lesions of the nervous system containing apparatuses for faradic, galvanic, and static electricity and high frequency currents, an x-ray room, an operating room, etc. From 1902 to 1915 not less than 24,571 cases were treated at this institution.

The Laboratory in Its Relation to the Purchase of Supplies.

Burt E. Nelson, Ph. C., Binghamton State Hospital. State Hospital Quarterly, 1916, I, No. 4.

The chemical laboratory of this hospital, in which the analyses for the purchasing committee for state hospitals are made, occupies a position quite similar in function to that of the laboratory in a large manufacturing or other commercial business. The laboratory assists in establishing the comparative values of materials submitted with bids for contracts, and later checks, in large measure, the deliveries to the various hospitals under these contracts. Quite a large proportion of the purchased supplies are more or less amenable to laboratory evaluation. The hospital laboratory can be used in the determination of textiles, agricultural chemicals and seeds, laundry chemicals, paints and painting materials, rubber goods and lubricating oils, while waters, metals, engineering supplies, and foods make up the remainder.

The purchase of a good grade of coal at a reasonable price is only the first problem in fuel economy. The second, and by far the more important, one is to burn that fuel efficiently, so that a maximum number of pounds by weight of steam may result from each pound of coal. This practical combustion in the boiler furnace is a definite physicochemical process and subject to laboratory control, although, from the nature of the case, the analytical work is usually more conveniently done in the particular power plant than in some place more remote.

In the case of cloths used for clothing the laboratory tests are of value, but the kinds of tests will vary somewhat with the use to which the fabric is to be put. In men's suitings the proportion of woolen and cotton, the weight per square yard, from which the weight per running yard is calculated, the nature of the weave, and the fastness of the color are all important. The tensile or tearing strength is also of some value. In cotton fabrics for women's dresses the weight, fastness of the color, and tearing strength are usually most important, although the pattern should be considered from the esthetic standpoint. The value of strong canvases depends almost entirely on the tearing strength.

Analyses of rubber goods often furnish somewhat paradoxical results. Old tissue, containing a larger amount of pure rubber, may show more poorly in the physical tests, on account of its old, "dead," and sclerotized condition, than a newer "young" or "live" tissue which really contains less rubber. Other things equal, however, the tissue which contains the most actual live rubber is usually the longer lived.

Fumigation by Cyanide Gas. Surgeon R. H. Creel, U. S. Public Health Service. The Military Surgeon, 1916, XXXIX, No. 3.

As a result of considerable experimental work, we have demonstrated that 10 ounces of potassium cyanide (KCN) per 1,000 cubic feet of air space is excessive, and that 5 ounces of cyanide per 1,000 cubic feet is sufficient for the destruction of rats and various disease-carrying insects. By this reduction in the amount of material used, cyanide gas is less costly than either sulphur dioxide or carbon monoxide, the comparison, based on a unit price per 1,000 cubic feet of space fumigated, being:

Carbon monoxide	\$0.16
(Unit price based on number of ships fumigated per month.)	
Sulphur dioxide (4 percent) gas.....	.10
Potassium cyanide at 25 cents per pound.....	.08
Sodium cyanide at 24 cents per pound.....	.06
(7½ ounces NaCN has the equivalent cyanogen of 10 ounces KCN.)	

Cyanide gas is rapidly evolved and quickly diffused. One hour's exposure is sufficient for fumigation of ships or other large spaces where deratization is desired, or for the destruction of fleas, lice, or bedbugs. Our cyanide fumigations have varied in magnitude from the fumigation of small launches and ships to the fumigation of a warehouse containing 1,600,000 cubic feet of space, and with equally effective results.

Cyanide gas, in brief, has the advantage over sulphur dioxide in that it is cheaper, and, because of its great diffusiveness, is much more efficient when fumigating ships or warehouses filled with merchandise. Cyanide fumigation of loaded ships, requiring, as it does, only one hour, in comparison to twelve hours for sulphur dioxide fumigation, possesses an obvious advantage over the latter. Cyanide gas is not injurious to the most delicate fabrics. Fumigation by this agent can be performed in vessels or warehouses containing fabrics, perishable cargo of fruits or vegetables, teas, coffee, tobacco, etc., without the least damage.

PROPORTION OF CYANIDE GAS LETHAL FOR ANIMALS AND INSECTS

Objects exposed to gas	Duration of exposure	Strength of gas	Cost of fumigation per 1,000 cubic feet air space
Rats	1 hour	5 ounces KCN per 1,000 cubic feet air space.	\$0.08
Fleas.....	15 minutes	2.5 ounces KCN per 1,000 cubic feet air space.	\$0.04
Lice.....	2 hours	10 ounces KCN per 1,000 cubic feet air space.	\$0.16
Bedbugs.....	1 hour	5 ounces KCN per 1,000 cubic feet air space.	\$0.08
Roaches.....	1 hour	10 ounces KCN per 1,000 cubic feet air space.	\$0.16
Mosquitoes.....	15 minutes	0.4 ounces KCN per 1,000 cubic feet air space.	\$0.006
			(Approximately ½ cent.)

The trustees of the Toledo Hospital, Toledo, O., have appointed P. W. Behrens superintendent of this institution to fill the place made vacant by the retirement of Miss Margaret Wallace. Mr. Behrens was formerly superintendent of Lake Forest University Hospital, in Illinois. He received his training for hospital work at the University of Kiel, Germany. Since coming to this country he has been connected with the United States marine hospital service and with hospitals in New York, San Francisco, and Chicago.

INDEX OF HOSPITAL AND SANATORIUM LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature,
Army Medical Museum and Library, Office of the Surgeon-General,
United States Army.

- Bertarelli.** The Average Cost of Hospitals and the Standards of Hospital Construction in Italy (Del prezzo unitario degli ospedali e dei criteri per il prezzo degli ospedali italiani). Riv. di ingegner. san., Milano, 1916, XII, No. 9.
- Borchgrevink, F.** The Tuberculosis Sanatorium "Solbakken" in Ibbestad. Tidsskrift f. d. norske Laegfor., Kristiania, 1916, XXXVI, No. 14.
- Dekker, C.** The Care of Patients Treated in Sanatoriums, Children's Hospitals, etc., after their Discharge (De zorg voor patienten, verpleegd in sanatoria, kinderherstellingsoorden, etc., na hun ontslag). Tuberculose s' Gravenhage, 1916, XII, No. 2.
- Gjestland, H.** The Voss Tuberculosis Sanatorium. Tijdschrift f. d. norske Laegefor., Kristiania, 1916, XXXVI, No. 14.
- Indemans, J. M.** The Bureau of Advice and Assistance to Poor and Needy Tuberculosis Patients in Maastricht (Het bureau voor raad en hulp aan on- en minvermogene tuberculoselijders te Maastricht). Tuberculose, s' Gravenhage, 1916, XII, No. 1.
- Johnson, R.** The Diary of the First Governor of Plymouth Hospital. Jour. Roy. Nav. Med. Service, London, 1916, II, No. 2.
- Mazzetti, L.** The Isolation Hospitals in the War Zone (Gli ospedali contumaciali in zona di guerra). Giornale di med. militare, Roma, 1916, LXIV, No. 5.
- Mendes de Leon.** The Gorkum Hospital. Ziekenhuis, Amsterdam, 1916, VII, No. 8.
- Mendes de Leon.** The Radiotherapeutic Institute in Rotterdam. Ziekenhuis, Amsterdam, 1916, VII, No. 7.
- Regis, E.** The Demented Soldiers Interned at the Psychiatric Center of Bordeaux—Statistics and Comments (Les aliénés militaires internes du centre psychiatrique de Bordeaux—statistique et commentaires). Caducée, Paris, 1916, XVI, No. 5.
- Stumpff, J. E.** The Children's Clinic of the Municipal Hospital at Amsterdam (De kinderkliniek van het binnengasthuis te Amsterdam). Ziekenhuis, Amsterdam, 1916, VII, No. 7.
- Sudhoff, K.** Regulations for St. Antony Hospital in Berne of the 15th Century (Ordnung für das St. Antonius Spital zu Berne aus dem 15. Jahrhundert). Mitteil. z. Geschichte d. Med., Leipzig, 1915, XIV, pp. 407-409.
- Wortman, J. C.** Hospital Experiences with an Open-air Hall (Ziekenhuis ervaringen met een open-luchtzaal). Ziekenhuis, Amsterdam, 1916, VII, No. 8.

Miscellaneous

- Day Sanatorium "Het Weusthag" of the Anti-Tuberculosis Society at Hengelo** (Dagsanatorium "Het Weusthag" der Vereeniging tot bestrijding der tuberculose te Hengelo). Tuberculose, s' Gravenhage, 1916, XII, No. 2.
- Hospital Trains of the British Red Cross** (I treni della Croce Rossa inglese). Rivista di ingegneria san., Torino, 1916, XII, No. 13.
- Law Establishing Dispensaries of Social Hygiene for the Protection Against Tuberculosis** (Loi instituant des dispensaires d'hygiène sociale et de préservation antituberculeuse). Revue philanthrop., Paris, 1916, XXXVII, No. 225.
- Procuring Work for Tuberculous Patients** (Werkverschaffing voor lijders aan tuberculose). Tuberculose, s' Gravenhage, 1916, XII, No. 2.
- Reconvalescent and Working Home for Tuberculous Children at Valheim** (Rekonvalescent- og arbeidshjemmet for tuberkulose kvinder paa Valheim). Tidsskrift f. d. norske Laegefor., Kristiania, 1916, XXXVI, No. 14.
- The Hebrew Hospital at Amsterdam** (Het israëlitisch ziekenhuis te Amsterdam). Nosokomos, Amsterdam, 1916, XVI, No. 29.
- The Profession of Nursing in France** (La profession d'infirmière en France). Revue philanthrop., Paris, 1916, XXXVII, No. 225.

A MUCH SUPERINTENDED HOSPITAL

Los Angeles Institution That Has Had Seven Heads in Fifteen Months

Miss L. V. Swift has been elected superintendent of the Children's Hospital, of Los Angeles. She succeeds Miss Drusilla Schenck, who resigned some weeks ago and returned to her home in Cincinnati.

Miss Schenck was the sixth superintendent at the hospital within fifteen months. The board of directors sent east and secured her services after the resignation of Miss H. Grace Franklin last spring.

Some of the superintendents have not been satisfactory to the board of directors and others have not been satisfied with the management; but in the case of Miss Schenck it is claimed that purely personal reasons required her return to her home in Cincinnati and that no friction had developed.

Miss Swift has resided in Los Angeles for five or six years, and for two years has been connected with the Children's Hospital in various capacities. At the time of Miss Schenck's resignation Miss Swift was office assistant, and in that position displayed executive ability that recommended her to the board for the position of superintendent.

In any commercial enterprise such a state of things as a new head every two months would call for some drastic conscience searching and reorganizing. Where does the trouble lie?

Wants State Control of Tuberculosis

It is reported that at the next session of the Washington State Legislature the state will be asked to take over the county tuberculosis hospitals at Seattle, Spokane, and Tacoma. Owing to the influx of patients from other parts of the state, the counties operating the hospitals are said to have found the maintenance of the institutions too great a burden.



DEPARTMENT OF NURSING

Conducted by MISS ANNIE W. GOODRICH,
Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

How Shall the Superintendents of Small Hospitals Be Trained?¹

BY ANNIE W. GOODRICH.

PAPER I

I beg your indulgence for the following brief and bald presentation of this subject, to which I have not been able to give the time and thought it deserves. But if I had had at my disposal all the time that may have been considered necessary, I question whether my conclusions would materially differ from those I am about to advance.

I have sought unsuccessfully in such reports of this association as were at hand for a definition of the small hospital. I conceive, however, that we are considering the training required for the heads of hospitals of 50 beds, or even less, that are needed in and adequately serve the small town and its surrounding rural districts, or some uncovered, limited area in the city.

Before discussing the question of the preparation of the superintendents, we must of necessity determine the function of the institution. You may perhaps recall Mr. Homer Folks' concise summary of the hospital's function (he did not differentiate between the large and the small institution) that falls under seven heads:

- The care of the sick.
- The cure of the sick.
- The education of the sick.
- The training of physicians.
- The training of nurses.
- The extension of medical knowledge.
- The prevention of disease.

This conception of its function would seem to me to establish the modern hospital as the health center, from which would radiate all of the health interests of the community, a conception that should apply equally to the large hospital in the city and the small hospital in the town. We are no longer under the delusion that disease does not exist to any extent outside of cities with large tenement districts. Reliable investigators have revealed the fact that the infant mortality rate of the great city puts to shame the infant mortality rate of many small towns and even rural districts, and that tuberculosis and other infectious diseases have been known to abound in these communities. I cannot vouch for the truth of the story that on the thirty-five farms between two towns were found thirty-five stepmothers, but the reports of rural nurses, with the heavy emphasis that they place on the need of thorough training in obstetrics for those entering the rural field, would not seem to discredit it.

I have been repeatedly told that a very large number of the women patients in a certain state hospital for the insane were supplied from the factory of a small adjacent town, and many years ago I heard that the hospitals for the insane of one New England state had a very high proportion of farmers' wives. It would seem, therefore, that a hospital serving as a health center of even a rural community might find problems as serious and varied as those of the city.

We are not unaware that in both cities and towns are to be found numerous small, unrelated institutions whose functions do not permit of so wide an interpretation as the one we have accepted. It is not possible to conceive that such institutions will multiply, even if they continue to exist. While we may expect an ever-increasing number of hospital beds, an increasing complexity of hospital functions, and larger and more highly qualified staffs, it is quite possible that there may be even a decrease in the number of hospitals.

Weary as we may be of the constant reiteration of the words, *conservation*, *cooperation*, and *efficiency*, the principles they represent are too economically sound not to recommend them to the rapidly increasing social intelligence and sense of civic responsibility. And a public that is also becoming as enlightened as ours through the daily press, the popular magazine, and the publicity methods of health departments concerning scientific medicine, scientific methods, and their accompanying scientific paraphernalia, is not only going to demand such methods and equipment in its institutions, but is not going to be willing to contribute to numerous unrelated, even rival and poorly equipped, institutions when the same funds contributed to one large or several small closely related plants would insure a more scientific and vastly wider service to the community.

Our attention is again and again called, and very rightly, to the high percentage of uncared-for cases of sickness in the community as revealed by the study of sickness in Dutchess county. There are items in this most interesting study about which we do not hear so much that relate to the question of hospital care and the hospital's interpretation of its function. The presentation of these questions in the report has already, I believe, led to some beneficial changes, thereby strengthening my belief that the near future will see a much closer relationship between the hospital and the community and between the various hospitals themselves. Permit me one brief illustration: "There is," says Dr. Shillady, "no hospital provision for the care of early psychosis and no adequate provision is made for the care of feeble-minded and epileptics." Again the report says concerning a family, "If the social service organization had been connected with the Hudson State Hospital for the Insane (for there is a state-supported mental hospital in Poughkeepsie), would not this family have been kept under observation?" I believe now dispensaries and social service departments have been very generally established in connection with these state hospitals. I do not know much about the question of the closed or open-door hospitals, but, whenever I hear about the uncared-for sick of Dutchess county, I recall the beautiful and richly endowed Vassar Brothers Hospital, with its paid resident staff, its good equipment, and all that goes with an endowment; its moderately filled wards; its peaceful isolation from the sickness problems of the town. I recall also the other inadequate, insignificant, unrelated hospitals in the vicinity, and then my mind travels to other towns where somewhat similar conditions exist. If one did not know of a democracy where a system of control

¹Read before the eighteenth annual conference of the American Hospital Association, Philadelphia, September 26-29, 1916.

of hospitals does obtain—New Zealand—one would not be so optimistic concerning the future hospital relations in the United States.

Whether the superintendents of these institutions of the future will be physicians, nurses, or laymen, time and not the writer will determine. Unquestionably the professional preparation, either as physician or nurse, will be a distinct asset and permit of certain credits, but neither will suffice without a further definite preparation for a distinctly different and demanding business.

More and more it is being appreciated that a hospital's efficiency is to be judged by its cures and not by the low cost at which it is run, and this implies scientific medical and nursing work and all its accouterments.

Less and less is the superintendent of the hospital willing to assume also the superintendency of the school of nursing, but is demanding a qualified principal. If an intern staff is not provided now, it is more often because interns cannot be obtained than because they are not desired. Licensed engineers and licensed pharmacists are the rule rather than the exception. A student pathologist, or even a qualified pathologist, is not now infrequently found in the hospital of 50 beds. And the same may be said of the dietitian. I have been interested to note the emphasis placed on the need of dietitian experts, not less for 35 patients than for 150 or more, both by a hospital dietitian, Mrs. McCulloch, and a hospital superintendent who has had a long experience in both large and small hospitals—Miss Laura Coleman. Surely the chief administrator on whom falls the direction of this highly qualified group of workers should not be the one person who has not had a definite preparation for his specialty.

Whatever may have sufficed in the past, the institution for the sick, small or large, of the future will need apparently for its administration an educator, a scientist, a sociologist, and a good business man or woman, or one whose *business* it is to be a composite of all. The institution is indeed "the lengthening shadow of the superintendent," and to a very great extent the breadth of its policy is determined by him. Says Dr. Moses Collins: "In almost no other vocation of life is so much demanded of the man in the knowledge of human nature, the familiarity with business details, and all kinds of medical and legal lore, as is demanded of the head of an institution for the sick."

What shall be the content of education for this field and where shall it be obtained? No one interested in the problems of professional and vocational education can fail to have noted that for nearly all the business of life today the preparation that is being demanded is not a preparation in the business field alone, but through the schools and universities as well. Says Professor John Dewey:¹

"There are forces at work which are like destiny in their independence of conscious choice or wish. Not conscious intent, either perverse or wise, is forcing the realistic, the practical, the industrial into education—not conscious deliberation causes college presidents, who devote commencement day to singing praises of pure culture, to spend their working days in arranging for technical and professional schools. It is not conscious preference which leads school superintendents who deliver orations at teachers' meetings on the blessings of old-fashioned discipline and culture, to demand from their boards new equipment, new courses, new studies of a more 'practical and appealing' kind. Political and economic forces quite beyond their control are compelling them."

This year Columbia University opened a school of business in response to an insistent demand for more adequate preparation of men and women for the commercial field. Over fifteen years ago the Chamber of Commerce urged

that this school be established, and offered the university a grant of money for this purpose. Its establishment was deferred, however, for various reasons, which are set forth in an article by Professor Seligman, the chief of which I will quote.¹

"In the first place, it was felt that the demand had not yet become sufficiently great to justify the expectation of a student body satisfactory in either quantity or quality. Secondly, we were convinced that a successful school of the character desired would have to be conducted along academic lines of a modified kind, and that the best results could be hoped for only by securing academic teachers with a business experience rather than business men without academic experience. It was, however, at the time impossible to find a sufficient number of qualified instructors. Moreover, the literature of the subject was as yet embryonic, and the proper curriculum of such a school had nowhere been thoroughly worked out."

The course differs from the course in the Harvard School, being arranged rather on the basis of the schools of medicine, architecture, and journalism of Columbia. Students are admitted who have had two years of college work, or its equivalent, for a two years' course working toward a degree of bachelor of science. A third year is provided, which it is hoped that many will enter and in which they may obtain their master of arts degree. Of this third year Professor Seligman says:

"It is hoped that it will be the most valuable, as it will be the most unique, year in the school. It will correspond approximately to the clinical year that is now being added to our best medical schools."

The foundation required of every student is a knowledge of general economics, accounting, finance, business organization, and one foreign language. The other subjects may then be selected by the student, with the approval of the director.

What similar opportunities for preparation for hospital administration are now offered? As far as I know, the opportunities for the preparation of the superintendents and assistant superintendents of approximately 7,000 hospitals are limited to one division of a department of a college open only to nurses desiring to enter this field, and courses practical—mainly, of six months, I believe—in two hospitals, the latter a method of preparation that has fallen or is falling down in every other line of work.

One can conceive of no greater piece of constructive and enduringly valuable work for this association, no greater contribution toward a rapid standardization of hospitals, than the raising of a fund sufficient to establish at least one school of hospital institutional administration, and to command the services of the most highly experienced administrator in the field for its director, with an adequate staff of lecturers and instructors. Here should flock not only the future superintendents, but those already in the field. Single courses should be taken in the winter by the latter who are in the vicinity of the school, and superintendents from all over the country could, and undoubtedly would, avail themselves of the summer courses. The largest attendance in the department of nursing and health that we have yet had was in the past summer session, and about one-third of the group had been or were hospital superintendents.

I cannot speak for all summer schools, but for the summer school of Columbia University all the bars are let down for students who are already engaged in any field; that is to say, the courses are open to those who do not meet the educational qualifications required for admission to the regular courses. It is true, no credit is given, but the essential feature of the course—the knowledge—is obtainable. This is also true of the very numerous extension courses that are now offered during the college

¹American Education and Culture, John Dewey, The New Republic, July 1, 1916.

¹A University School of Business, Edwin R. Seligman, Columbia, Quarterly, June, 1916.

year; in other words, the university, while demanding high standards for those about to enter any field for which it offers preparation, is most generously and democratically elastic toward those who are already established in that field.

Professor Ladd, of Yale, in a recent article entitled, "How Can We Improve Public Education?" says:¹

"Such summer schools as are held annually at Columbia and Chicago, and at scores of other centers of the higher education, are worth far more for improvement of the personnel of the teaching force than innumerable teachers' conventions, spent chiefly in listening to themselves or to brilliant platform orators, chosen from the ranks of the politician and the clergy."

I think these conventions are of far greater value than Professor Ladd's remark would indicate that he believes, but it does suggest the desirability of biennial meetings, as such meetings would permit of attendance at both conventions and summer schools. The three national nursing organizations have already determined on biennial meetings, although I do not know that they had attendance at the summer schools in mind at the time. The National Educational Association held its convention in New York just before the opening of the Columbia summer school in order that those in attendance might avail themselves of this session. This example might be followed. Unfortunately hospital administrators' vacations do not extend through the whole summer, as do teachers'.

I have entered into such detail concerning the business school of Columbia, first, because it presents a very clear picture of the close relationship today between the school and the business of life, and, second, because it seemed to me to present the course that could reasonably be required for the institutional administrator. Two years of college or its equivalent, two years of technical or professional preparation, and one year of field work. This period of preparation may be felt by some to be too long. The course in hospital administration at Teachers' College covers a period of two years for those desiring to work toward a diploma in hospital administration and the degree of bachelor of science, the admission requirement being full high school and three years of professional training. Many of the students take only one year, but those who have taken the full course have not felt that they had more than, if they had even, covered the subject.

As we look over the courses in the Columbia School of Business and compare them with those that would be called for by a school of hospital administration, the former seem arid and restricted in contrast to the rich human and material interests of the subject that the latter would demand.

Psychology would not be limited to the psychology of advertising and selling. Organization and administration would include and extend beyond business organization. To accounting, economics, and insurance would be added sociology, physics, architecture, hygiene with its varied branches, such as sanitary science, industrial hygiene, health administration. I might continue almost indefinitely, exhausting you before I had the subjects.

It is indeed probable that Professor Seligman's characterization of the literature relating to business as embryonic may apply to the literature relating to the hospital. It is true that there are still only chapters dealing with its problems where there should be volumes. But, on the other hand, we have now chapters where formerly the whole subject was covered in one paper, and every year sees an increase in the quantity and a distinct improvement in the quality of the literature of the field both in this and other countries. A not inconsiderable body of

literature has been built up through the schools of practical arts, dealing with laundering and other problems of institutional and household economics, and the literature dealing with nutrition, food economics, and cookery is really quite extensive. There has also, I believe, been a good deal written concerning hospital architecture.

As a practice field, I believe the small hospital, under proper conditions, will be invaluable. The close relation between the superintendent, the plant, and the community, the limited area to be covered, make possible a study and full grasp of every department and all its details, as well as of the community, that is not possible in larger institutions. I am sure that such students would give a full return to the institution for the experience gained even while gaining it. The very teaching of such a group would bring a definite return to the teacher, not only in inspiration, but in actual knowledge. The reputation of a hospital that offered a good practice field would be unquestionably enhanced. I do not know whether the quantity of students desiring such courses would justify the establishment of even one school of hospital administration; the quality needed in the field, I am sure, would. It is constantly asserted that a demand creates a supply. The demand for qualified workers in all departments of a hospital has come, and it far exceeds the supply.

The University of the State of New York has deemed the libraries of this and other states of sufficient importance to the community to justify the establishment of a state school for librarians, although the group entering yearly rarely numbers, I think, over thirty. For admission to this school a full college course is required. The young women (for the students are women mostly) come from homes of no greater wealth, I am sure, than the homes from which come our superintendents of hospitals. I mention this because I fear that some will feel that an overemphasis has been placed on the costly college work. Too much emphasis cannot be placed on the need of a liberal education, and the technical education through the university, for this field.

To be the master of our problem we must come in contact with master minds. "Of what use is a college training?" says James. "A certain amount of meditation has brought me to this as the pithiest reply which I myself can give: the best claim that a college education can possibly make on your respect, the best thing that it can aspire to accomplish for you, is this—that it should *help you to know a good man when you see him.*"¹

We have today amassing in these great treasure houses of human experience the best that is to be found in the material world, not less than in the world of letters and art. Here may be found the experts in every department of every field represented, concerned to sort out and evaluate the product of the workers, to discover the masterpieces, to build up through their own and other departments a body of knowledge for the future worker that he could otherwise obtain only through five, ten, or fifteen years of experience, if indeed he ever obtained it at all, and thereby advance by many years the value of the worker and the work.

The fundamentals concerning education in any field do not so widely differ. Scientific methods of reasoning are not changed for every subject to which they are applied. Whether we are teaching history, art, or the technic of nursing procedures, the principles of teaching remain the same.

To effectively adjust and keep in harmonious and efficient relationship the human and material elements in an

¹George Trumbull Ladd, New York Times, July 30, 1916.

¹The Social Value of the College Bred—William James.

institution for the sick requires a working knowledge of psychology that I defy any university to supply. But what of psychology is there for the human race, no matter where or how the individual interests are directed; and it is always possible to build up a course, or courses, bearing directly on any particular field, provided, however, there are experts in that field to construct them. In the rich soil of a liberal education grow most abundantly vision, ideas, and initiative. If for the commercial enterprises of the nation are needed these qualities, are they not equally needed for the great human enterprise of national health building?

I hardly need to summarize my conclusions concerning the problem which is now before us, but briefly they are these:

Whatever may be the function of the small hospital of today, the hospital of the immediate future, large or small, will do a sufficiently wide and complex piece of social and scientific work to demand a highly prepared administrator.

That at present there is no school or department in which adequate preparation for this field can be obtained.

That to discuss anything short of a school, or at least a department, is as futile and wasteful of time as is the tinkering with an outgrown garment, since courses, excellent as far as they go, already exist, and could and should be availed of until such a school is established.

That an association as representative as this might, it would seem, through some channel, obtain the endowment required for such a field of preparation.

That to make graduation from this school one of the eligibility requirements for the future members of the association would not be more unreasonable than it is to demand a degree in medicine for membership in the American Medical Association or a diploma from a recognized school of nursing for admission to the American Nurses' Association.

And, finally, that such a school would advance the standardization of hospitals by many years.

The Place of Tuberculosis Work in a Nurse's Training

BY ANNIE S. RATHBONE, Superintendent of Nurses, Westfield State Sanatorium, Westfield, Mass.

PAPER II

In the general training of a nurse, an ideal course would emphasize certain broad fundamental principles. Each part of the work would be an interpretation of all the parts—chapters in a book which the theme requires, and which in themselves are of little meaning without the context. There are chapters which may be shortened with less disadvantage than others. An elementary study of main features in the treatment of the eye, for example, is quite consistent with a general three-years' course. An elaboration of that subject would constitute a special course. We give the pupil a full allowance of time in the operating room because it yields unique occasions for mastering the great principles of asepsis. We think she should have practical experience in a psychopathic department—it is the best place for studying the diseased mind, and, without that sensitive understanding of sick humanity, she is only a machine.

Why should tuberculosis be classed as a "special" branch if "even conservative writers are led to remark that, if systematic inspection is made, tuberculous lesions are found practically in 100 percent of the bodies of adults?" (Osler.) And, again, "the failure of the natural tendency of the body to check the growth of the tubercle bacilli is a fault of the body." Can there be a more graphic or comprehensive opportunity for the nurse to

learn the highways of preventive medicine, that promised land of the twentieth century?

As far as nursing is concerned, tuberculosis, in its progress, requires two separate and different lines of treatment. Of these the first is pursued in those cases capable of improvement or arrest. It is the carrying out of a strict regimen of living, founded chiefly on the careful regulation of rest and exercise, but largely, too, on every possible hygienic measure, such as cleanliness in all its forms (of which outdoor living is but one) and regularity in every detail of life—regularity of meals, of work, of rest, and of play hours. This course of treatment is usually begun in a sanatorium and carried on at home after a sanatorium education. Here, too, begins that sanitary teaching of the patient which is so essential in preventing the spread of the disease. This education of the patient is dependent for its success on the nurse.

As an isolated instance, the hospital nurse with instincts of nursing proper does not enjoy her part in this program. It hurts her sense of her own value to have to act the part of policeman to people in apparent good health and with supposed common sense—to send them to bed for their rest hours, to watch that they do not overstep their prescribed amount of exercise, to keep them from remaining in their warm dressing room, where they are prone to gather, armed with a thousand prepared excuses.

But in an ideal training this course is not isolated. While gaining her knowledge of social service and district nursing, the pupil has been vastly impressed by the result of unhygienic living and weak will power, as evidenced by erratic ways of conducting life. She knows what these things do to human existence. She is lifted above the thought of self, to use her knowledge in place of the patient's ignorance, her strength for his weakness of will, her good nature for his moodiness; and reads for herself, too, advanced chapters on the power of tact and self-control. In all this she has the added stimulus of the physician's attention, for it is at this stage that, naturally, she has, not only his orders to carry out, but his most interested cooperation in the discipline of the ward, associated, as he is, with her in the hope of successful results of their united work. Here she gains a clear impression of the value of rest and of other sound measures, which are sometimes quite spectacular in their effects.

Also the care of the hopeful tubercular case is very similar to that of the ordinary convalescent. The latter is not found to a great extent in a large general hospital. He is hurried out to make room for more pressing cases. It is true that most nurses do not care for convalescent nursing on account of the lack of excitement; nevertheless the care of convalescents is distinctly the nurse's field. It is here that the busy doctor relaxes his oversight, and says to her, "My work is done; you finish."

The later stages of tuberculosis demand a fine variety of nursing. It is, in its truest sense, nursing proper; and only when a woman is her best self can she be successful in it. It is little understood how many forms of suffering may be present in these cases. The ubiquitous germ now has every chance to work its deadly will against a worn-out and beaten vitality. Almost any symptom may appear, according to the idiosyncrasy of the patient. Each new development is a test of the nurse's skill to relieve distress. All efforts are directed to the simple amelioration of symptoms. It is true that well-taught attendants of refinement and intelligence, recruited from the ranks of "arrested" cases, whose latent disease bars them from ordinary activities, are often invaluable in the care of the sick tuberculous. But it is a blot on our humanity if this care is un-

dertaken without the closest supervision of skilled nurses. These will not be forthcoming unless familiarity with the work and the meaning of it is revealed in their training, or at some later period. With most it has to be the latter, But why?

The answer is that the victim of pulmonary tuberculosis is seldom to be found in the general hospital. He is not wanted. The incipient case is out of place there, as the best results come from treatment carried out away from the city and the interference of friends. As for advanced cases, general hospitals certainly oppose every suggestion of undertaking their care. They increase the mortality rate; they are troublesome, expensive, and, worst of all, they are "uninteresting."

Assuming that the hospital contracts to care for the needy sick of the community, and to undertake the practical education of doctors and nurses along lines where the highest death rate points, it would seem that one way of fulfilling these functions would be to open tubercular wards. In one of the last publications of statistics, Miss Brandt says that "comparing tuberculosis with other diseases, we find that at the present time it is the most important cause of death in the United States."

In several states laws have been passed obliging counties to open hospitals for tuberculous cases, and in Massachusetts each city of over 10,000 inhabitants must provide hospitals for the accommodation of such patients. In some instances this has resulted in general community hospitals opening wards for pulmonary tuberculosis.

The most frequent argument against the introduction of tubercular subjects as patients in general hospitals is the fear of infection. That sounds not right. Where should there be less danger from this than in an institution guided by the highest medical skill and learning of the community?

But tuberculosis is not conveyed to adults unless the amount of infection is "massive." Contrary to prevailing ideas, it is not generally contracted by nurses from their patients. Dr. Trudeau stated that, in the thirty years since his sanatorium was opened at Saranac Lake, he never knew an employee to contract tuberculosis there. Nurses in such institutions are careful to avoid danger by teaching their patients not to be a source of danger. Indeed, the open-air work often improves the young woman's physical health, and, instead of being lowered, her resisting power is raised; for it is a fact that in a well-planned and equipped tubercular ward, during the warm weather, practically all the nursing may be done in the open air, and in winter a great part of it may be done there. As long as possible it is considered more satisfactory for patients to go to the toilet rather than use a bed-pan; so this source of danger is lessened. One of the primary rules is "to cover up your cough and sneeze; for if you do not, you spread disease." In well-conducted tuberculosis wards, nurses do very little handling of sputum boxes. As patients are taught that this is the one service they must perform for themselves if possible, it is not unusual for them, until the last few days of their life, to wrap up their own soiled gauze handkerchiefs and paper sputum boxes, ready for burning. They have been trained to do this conscientiously, and they prefer even in their weakness to keep on doing it.

As is reiterated so often, tuberculosis kills more people than any other disease. The economic loss to nations is solemnly, but futilely, computed by statisticians; the mental and physical suffering caused by it puts all calculations to scorn; yet the average nurse today declines to enter this greatest of fields. It is so "uninteresting," she

says simply. The fault lies not with the nurse, but with her education. She enters the training school as so much plastic material. She leaves the hospital stamped by the impress of convictions acquired there. Indifference and aversion come so frequently from lack of understanding.

It is encouraging that a short course in social service or in district nursing almost always inspires an enthusiasm that illumines the whole of a woman's after-work. She has met facts face to face, and knows things about the sources of disease which her own good home or her hospital could never teach her; and it is the exception, rather than the rule, that such an education, carried on even for as short a period as can be spared from a crowded three-years' course, does not incline the nurse toward the broader fields of social service, school or factory nursing, sanitary inspection and tuberculosis work, rather than toward that gradually narrowing pathway of private nursing, which until a few years ago was the only thought of the great majority.

One of the most progressive training schools lately started a system of giving its nurses a little glimpse of social service at the outset of their career as pupils. Under the teaching of trained workers they get this experience immediately after their period of probation. Can there be a more excellent method of enlightenment as to the needs and larger opportunities of nursing work?

We arrive, then, at a starting point for this vital part of a nurse's education. The present standard is a three-years' course for all branches, and there is no widespread tendency to prolong it. Perhaps the first question to decide is whether the care of tuberculosis should be considered a "special" study any more than or as much as, the management of a laparotomy case. Let us rather regard it, in view of its mortality rate and for the reasons cited, as one of the essential bases of a broad and general training, which will fit young women for the kind of work our civilization today demands, and without which they are not qualified to practice their profession.

We will consider the minimum amount of time she should spend to accomplish this. After the probationary period, during which she has had some theoretical and technical teaching, and an introduction to ward work, we will hope that our pupil may enjoy at least two weeks of assisting and associating with trained social workers, just to serve as a keynote for tuning her ambitions. It will follow that the rest of her first year will be a busy one spent in the routine of the ward, her first night duty, and class work.

Let us hope that, early in her second year, for another two weeks she may for half of each day accompany sometimes the general district nurse and sometimes the tuberculosis nurse, according to a schedule; and for the other half attend and assist in the dispensary, where there are tuberculosis clinics once or twice a week. She will in this way see facts in their relationship to one another. Tuberculosis will stand forth in its true proportions and an indelible impression made of its gruesome havoc among young children.

The end of the second year, when her energies begin to flag, would be a fitting time for an affiliation course of two months in a good sanatorium. Much care is given to the sites of these institutions, and the scenery is often beautiful. Here the change to country life and the lighter physical work should give her strength for the last strenuous year. Now she is mentally equipped for understanding the system of "cure" as practiced in such a place. There is usually a hopeful, happy atmosphere in these sanatoriums for incipient cases. She should gain inspiration here.

Returned to her general hospital, which has a tubercular ward, she would later get a sadder experience in the care of those cases that have failed to resist the onslaught of the disease, and which now demand her tenderest services. This would give her that knowledge of the nursing of chronic cases of which she sometimes gets little. But she has many other things to learn. There is her operating room work, and there is that maternity training which perhaps, for real blessings, should take precedence of all. Four weeks spent on advanced tuberculosis, combined with her general knowledge, should be helpful in learning the phenomena of the disease.

So our nurse has used one month studying the rudiments of social, district, and dispensary work. She has spent three months on tuberculosis proper. These subjects have been taken alternately with dietetics, child training, psychopathic, maternity, and operating room work, besides the general work on the medical and surgical wards.

At the end of three years she should have gained a true perspective. She knows the outstanding faults of our present system of life; she knows something of the treatment of the ills which are the result of these faults; but, most important of all, she wants to teach humanity to prevent them. She wants to grapple with the problem. How will she do it? Why should she not be of increasing use and power in modern life?

Graduation is literally a "stepping forward." One step implies others to follow. In taking steps, let us not lose ourselves in bypaths, but keep steadily to the broad road if we would travel far.

SAFETY COUNCIL HAS BANNER MEETING

Over 2,000 Attend Detroit Convention and Great Enthusiasm Prevails

More than 2,000 representatives of industrial corporations attended the National Safety Council Convention at Detroit on October 17-20. There were 140 speakers at the meeting, 581 members attended the banquet on Tuesday night, October 17, and 8,000 people visited the commercial exhibit of the council.

The Detroit meeting was by far the best that the Safety Council has ever had, and some things were done that had never been attempted before. For instance, a comprehensive official commercial exhibit was one of the main features at Detroit and there were fifty-five exhibitors.

The meetings were held in the form of fourteen sections, and, with the exception of the banquet and smoker, one round table session, and the business meeting, there were no general sessions of the association.

The Health Service sectional meeting was regarded by everyone in attendance at the convention as one of the chief features of the convention, and the papers read before that section attracted very much attention. The program of the health section was as follows:

WEDNESDAY, OCTOBER 18—AFTERNOON SESSION

Report of chairman. Report of secretary. Reports of committees. Appointment of nominating committee.

ADDRESSES

The Scope of Industrial Health Service—Dr. Otto P. Geier; Discussion.

Health Education—Dr. L. G. Shoudy, chief surgeon Bethlehem Steel Company, South Bethlehem, Pa.

Physical Examination of Employees—Dr. Wilbur E. Post, chief medical adviser People's Gas, Light, and Coke Company, Chicago.

First Aid—Dr. J. C. Bloodgood, medical department, Johns Hopkins University, Baltimore, Md.

Occupational Diseases—Dr. E. R. Hayhurst, director Division of Industrial Hygiene, Ohio State Board of Health, Columbus, O.

Health Insurance—A. W. Whitney, general manager National Workmen's Compensation Service Bureau, New York city.

THURSDAY, OCTOBER 19—AFTERNOON SESSION

ADDRESSES

The Company Doctor—Dean Samuel S. Marquis, Department of Education Ford Motor Company, Detroit, Mich. Discussion—Mrs. Lillian Burt, American Issue Publishing Company, Columbus, O.

Employment, Medical Supervision, and Safety—L. A. Phelps, superintendent insurance and maintenance Avery Company, Peoria, Ill. Discussion—Frank Cheske, manager employment department Packard Motor Car Company, Detroit, Mich.

Industrial Hospitals and Dispensaries—Dr. R. C. Cabot, Boston, Mass. Discussion—Dr. T. R. Crowder, chief surgeon Pullman Company, Chicago; Dr. H. N. Torrey, surgical director Michigan Workmen's Compensation Mutual Insurance Company, Detroit, Mich.

Hernia—Dr. Jas. Burry, chief surgeon Illinois Steel Company, Chicago. Discussion—Dr. C. W. Hopkins, chief surgeon Chicago & North-Western Railroad, Chicago.

Dental Work in the Industries—Dr. Lee K. Frankel, sixth vice-president Metropolitan Life Insurance Company, New York city. Discussion—Dr. C. E. Smith, dental clinician B. F. Goodrich Company, Akron, O.

FRIDAY, OCTOBER 20—AFTERNOON SESSION

FOUR ROUND TABLE MEETINGS

(Thirty minutes' discussion of each topic. Each speaker to act as the leader of the discussion following his own address.)

ADDRESSES

Relationship of Health to Industry—Dr. W. A. Evans, Chicago Tribune, Chicago, Ill.

Medical Supervision of Workmen—Dr. Harry E. Mock, chief surgeon Sears, Roebuck & Co., Chicago.

Reduction of Health Hazards—Dr. Francis D. Patterson, chief division of hygiene and engineering, Pennsylvania Department of Labor and Industry, Harrisburg, Pa.

Standards of Industrial Hygiene—Dr. J. W. Schereschewsky, United States Public Health Service, Pittsburgh, Pa.

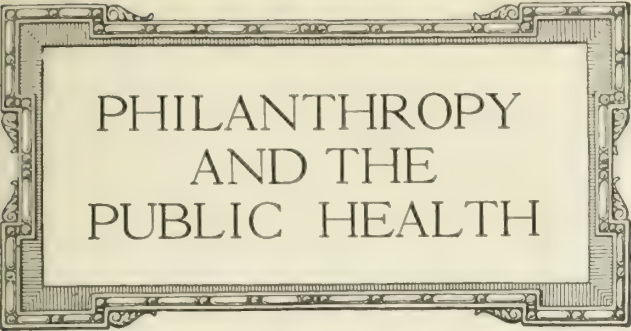
Report of nominating committee and election of officers.

The following officers were elected for the coming year: L. R. Palmer, Department of Labor and Industry of Pennsylvania, president; David Van Schaack, Aetna Life Insurance Company, first vice-president; H. W. Forster, Independence Inspection Bureau, second vice-president; M. A. Dow, New York Central Lines, third vice-president and director of exhibits; W. H. Cameron, who has been the motive power of the council since the creation of the organization in the office of secretary-treasurer, was given additional distinction by a change of title to general manager and treasurer; C. W. Price has been made field secretary of the council. Seventeen cities have made bids for the next meeting of the council, but the meeting place will not be decided for some weeks.

There were eighteen teams in the trials this year at Detroit, and an immense amount of enthusiasm developed among those who were working for the great silver cup trophy.

This is the first year that the National Safety Council had attempted an organized commercial exhibit, and it proved to be not only one of the most interesting features of the convention, but promises to become of overshadowing importance. The council did not conduct its own exhibit, but arranged with an organization whose business it is to conduct such affairs and the association received part of the profits from the exhibition. It is planned next year to conduct the commercial exhibit as a definite part of the council, the council to be responsible for the character of the exhibits.

The administrative staff of the National University Hospital of St. Louis has recently been reorganized, with Miss M. E. Hainsworth as superintendent; Miss Dora E. Carter, formerly of the Jewish Hospital, St. Louis, as night superintendent; and Miss Heffron, of St. Luke's Hospital, in the same city, as superintendent of nurses.



PHILANTHROPY AND THE PUBLIC HEALTH

Conducted by THE NEW YORK ASSOCIATION FOR IMPROVING THE CONDITION OF THE POOR.

BAILEY B. BURRITT, General Director.

WILLIAM H. MATTHEWS, Director.

Department of Family Welfare.

DONALD B. ARMSTRONG, M. D., Director.

Department of Social Welfare.

Please address items of news and inquiries regarding Philanthropy and the Public Health to the New York Association for improving the Condition of the Poor, 105 East Twenty-second street, New York City.

Indexes of Nutrition and Growth

BY FRANK A. MANNY,

Special Investigator Bureau of Welfare of School Children New York Association for Improving the Condition of the Poor.

In any situation involving the examination of a large number of individuals, it is very helpful to have some means of rough grading which will make it possible to concentrate attention on the cases having the greatest need. This is particularly true in the medical inspection of school children, on which so little has been done as yet to make a reasonable adjustment between the agencies employed and the scope of the problem. For instance, in the medical inspection work of a large city it would be of great service were we able to know the respective proportions of the school population, not only with reference to presence and absence of physical defects, but also to the type of care needed for those who require attention. In addition to this, it would be well to know in the case of those not needing care what percentage are in superior condition. Very little more time than is now given would be required to make a classification into the five groups given below, and on this basis intelligent work could be done in attempting to secure the facilities requisite for meeting the needs of the situation. The following grouping would prove an aid in this direction:

1. Excellent condition (a state of health that would be accounted "excellent" in favorable social conditions).
2. Good condition.
3. Defective, but can be cared for adequately under present home and school conditions.
4. Defective and requiring some degree of segregation for observation and control purposes, such as could be accomplished in a well-organized open-air or other special class room.
5. Defective and requiring such complete control as can best be given in an institution especially equipped for the purpose.

While no city is prepared at present to see that these three groups of physical defects are properly cared for, the knowledge of the nature and size of the various problems involved would have an immediate effect on the agencies already provided and lead to the establishment of others. Possibly the open-air class room could be made to serve as an observation station and clearing house for groups 4 and 5, and summer and all-the-year stations take

care of group 5, whose members are now buffeted about among clinics, convalescent homes, two-week term fresh air camps and then go back to congest the special and ordinary class rooms, and prevent proper care being given to those who could benefit by them.

One department of a study of defective nutrition which has been undertaken by the Bureau of Child Hygiene of the New York City Department of Health and the Bureau of the Welfare of School Children of the A. I. C. P. of that city has been concerned with improved methods of diagnosis and classification. A comparatively slight modification of the methods of grading nutrition has within the present year doubled the number of children in the city schools, who have been brought under the care of school physicians and nurses.

The term nutrition is used in this connection to refer to that condition of bodily health which is the result of many congenital and environmental forces, and not merely to the immediate results of feeding; yet it seems fitting that the expression of this more general condition should center in a word indicating our main source of energy and development. There are few fields of medical activity more deserving of cultivation than that of the diagnosis of defective nutrition. We need for this purpose special sections of clinics and dispensaries in charge of experts who can give their major care to the problems involved. Boston and New York are making beginnings in establishing nutrition clinics.

Naturally, in this study the various attempts that have been made to work out indexes of nutrition and growth have been studied, and in the accompanying bibliography the more important references on the subject have been brought together. It has not seemed best in the space of a brief article to describe or evaluate the various experiments referred to. All that have been included have the common aim of working toward some measure which will serve, in a general way at least, to show standards of the condition of physical fitness and to select from a larger group those individuals who need special attention.

INDEXES OF NUTRITION AND OF PHYSIOLOGICAL DEVELOPMENT¹

I. Weight and height.—Greenwood, pp. 8, 17-24, 77-95; Baldwin 1, pp. 60-62; 2, pp. 11-22; Cornell, pp. 601-602; Bryant, pp. 218-224.

II. Average of weight and height.—Greenwood, pp. 8-10, 24, 27-28, 34, 69-76.

III. Annual percentage increases in weight and height.—Greenwood, pp. 11, 21, 38-41, 89, 96.

IV. Ratio of weight in pounds to height in inches.—Baldwin, 2, pp. 11-22; Greenwood, pp. 10-11, 19, 37, 94-95.

V. Ratio of weight in kilograms to height in centimeters.—London, 1909, p. 31; 1910, p. 128; 1913, p. 117; Newman, 1911, p. 32; 1912, p. 30.

VI. Ratio of $100\sqrt[3]{W}$ (Kg)
H (Cm).—Greenwood, pp. 11, 19-20, 37, 94-95; Livi, II, 20-28; Montessori, p. 181; Newman, 1910, pp. 31-32; 1911, pp. 27-28; 1912, p. 28.

VII. Oppenheimer's formula.—London, 1910, p. 129; Newman, 1910, p. 32; Schuyten, pp. 51-53; Oppenheimer; Wimmenauer.

VIII. Still's signs.—Leipoldt; Still.

IX. Blood ptosis.—Crampton, references 9, 10, 11.

X. Physiological age.—Beik; Bigelow; Boas, references 5, 6; Crampton, ref. 12; Foster; Grady; King; Pryor; Rotch; Smith; Long and Caldwell.

XI. Coefficient of vigor.—Woolston.

XII. Older's formula.—Older; Wimmenauer.

XIII. Becher-Lenhoff index.—Krauss and Becher; Lenhoff, Mohr and Stachelin.

XIV. Dunfermline scale.—Mackenzie.

XV. Development and nutrition.—Schereschewsky.

¹See list of references following.

REFERENCES

1. Baldwin, B. T.—Physical Growth and School Progress, U. S. Bureau of Education, 1914, pp. 60-62.
2. Baldwin, B. T.—A Measuring Scale for Physical Growth and Physiological Age. Nat. Soc. Study Education Yearbook, 1916, Part I, pp. 11-22.
3. Beik, Arthur K.—Physiological Age and School Entrance. Pedagogical Seminary, September, 1913.
4. Bigelow, Robert Payne.—Age. Reference Handbook of the Medical Sciences.
5. Boas, Franz.—The Growth of Children. Science, N. S., No. 937, pp. 815-818.
6. Boas, Franz.—Growth. Monroe's Cyclopedia of Education, II, pp. 187-190.
7. Bryant, Louise Stevens.—School Feeding, pp. 218-224.
8. Cornell, Walter S., M. D.—Health and Medical Inspection of School Children. Height and Weight, pp. 601-602.
9. Crampton, C. Ward, M. D. (director of physical training, Department of Education, New York city).—Blood Ptosis—A Test of Vasomotor Efficiency. Abstracts of address at the Fourth International Congress on School Hygiene, Buffalo, August 25-30, 1913. Reprinted from the New York Medical Journal for November 8, 1913.
10. Crampton, C. Ward, M. D.—Blood Pressure in Its Relations to Physical Training Procedure—Olympic Congress Lectures, Gold Medal Thesis, St. Louis Exposition, 1904. Physical Education Review, 1905-1906. Medical News, September 16, 1905.
11. Crampton, C. Ward, M. D.—The Blood Ptosis Test and Its Use in Experimental Work in Hygiene. Reprinted from the Proceedings of the Society for Experimental Biology and Medicine, 1915, XII, pp. 119-122.
12. Crampton, C. Ward, M. D.—Physiological Age. American Physical Education Review, March, through June, 1908.
13. Foster, Wilfred L.—Physiological Age as a Basis for the Classification of Pupils Entering High School. Psychological Clinic, May 15, 1910.
14. Grady, W. E.—Age and Progress in New York City. Psychological Clinic, January 15, 1913.
15. Greenwood, Arthur (see Note 1).—Health and Physique of School Children. Ratan Tata Foundation. P. S. King & Son, London, 1913, pp. 8, 10, 11, 17-25, 27, 28, 34, 37-41, 69-96.
16. Heron, David.—Influence of Defective Physique and Unfavorable Home Environment on the Intelligence of School Children. Galton Eugenics Laboratory Memoirs, VIII, 1910, pp. 48-52.
17. King, Irving.—Physical Age and School Standing. Psychological Clinic, January 15, 1914.
18. Kranse, Paul.—Lehrbuch der Klinik Diagnostik, 1909, p. 451.
19. Leipoldt, Dr.—London County Council, III, 1913. Report of Medical Officer, Public Health, p. 124.
20. Lenhoff and Becher.—Congress für innere Medizin, 1901.
21. Livi, Antropometria Militare, II, pp. 20-28.
22. London County Council.—Report of Medical Officer, Education Department, Public Health, 1909, p. 31; 1910, p. 128; 1913, p. 117.
23. Long and Caldwell.—Some Investigations Concerning the Relation Between Carpal Ossification and Physical and Mental Development. American Journal Diseases of Children, February, 1911, I, pp. 113-138.
24. Mackenzie, Alister, M. D. (see Note 2).—Seventh Annual Report Medical Inspection, Dunfermline, Scotland, 1912-13, pp. 19, 20.
25. Mohr und Stachelin.—Handbuch des inneren Medizin, 1912, IV, pp. 562-563.
26. Montessori, Maria.—Pedagogical Anthropology, p. 181, et seq.
27. Newman, Sir George, M. D.—Reports of Chief Medical Officer, Board of Education, England, 1910, pp. 31, 32; 1911, pp. 27, 28, 32; 1912, pp. 28-30.
28. Older, Dr. G.—Die Fettpolsterdicke als Index des Ernährungszustandes bei Erwachsenen. Med. Klinik, 1910, No. 17.
29. Oppenheimer, Karl.—Zeitschrift für Schulgesundheitspflege, XXII, p. 880. Über eine Methode zur ziffermassigen Bestimmung des Ernährungszustandes, München.
30. Pryor, J. W., M. D.—The Chronology and Order of Ossification of the Human Carpus. Bulletin of the State University of Kentucky, June, 1905; October, 1906; April, 1908. Some Observations on the Ossification of the Bones of the Hand. Bulletin of the State University of Kentucky, November, 1916.
31. Rotch, Thomas Morgan, M. D.—The Development of the Bones in Early Life, Studied by the Roentgen Method for the Determination of an Anatomic Index. From the Transactions of the Association of American Physicians, 1909.
32. Rotch, Thomas Morgan, M. D.—School Life and Its Relation to the Child's Development. The Sunday Free Lecture, delivered at the Harvard Medical School, Boston, March 14, 1909. From the American Journal of the Medical Sciences, November, 1909.
33. Schereschewsky, J. W.—Studies in Vocational Diseases. Public Health Bulletin, No. 71, p. 37.
34. Schuyten.—School Hygiene, pp. 51-53, 1913.
35. Smith, Harold W., M. D.—Rotch Method of Roentgenographic

Age Determination. United States Naval Medical Bulletin, January, 1913.

36. Stiller.—Die Asthenische Constitutions Krankheit. Stuttgart, 1907.

37. Wimmenauer, Dr.—Neure Methoden zur zahlenmassigen Bestimmung des Ernährungszustandes Schulassistentenarzt. Mannheim, XXIII, p. 622 (Oppenheimer).

38. Woolston, Howard B.—A Study of the Population of Manhattanville. In Columbia Studies in History, etc., XXV, No. 2, p. 139.

Note 1.—Dr. Greenwood's Health and Physique of School Children contains more material on the subject than any other single reference. He has applied several of the indexes to the records of the measurement of 800,000 British school children. The care which he has shown in previous studies is evident in this work, in which three styles of type are used to indicate various degrees of reliability in the statistics worked on.

Note 2.—For a simple scale, that prepared by the Carnegie Trust at Dunfermline, Scotland, seems to be most effective. It is now in use in several important investigations in New York city, and has been adopted by the department of health for the examination of all school children, classifying them into four groups, two of which include those whose defective condition requires observation and treatment respectively.

PHYSICIANS AND NURSES AS MISSIONARIES

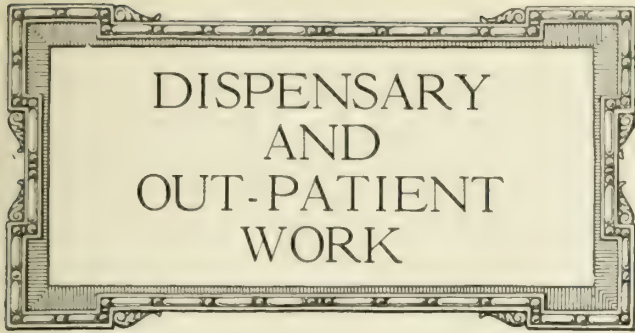
Rockefeller Foundation Will Send Hospital Ship as Civilizing Influence to Head Hunters

The Rockefeller Foundation is fitting out a hospital ship for a five years' cruise among the islands of the Sulu Archipelago. The Foundation has learned that many of the Moros are suffering from skin diseases, malaria, hookworm, dysentery, and other ills which could be handled with success by skilled physicians. Head hunting tribes in the Philippines have been reformed largely by the application of education and medicine, with a little more of the latter than the former. The Foundation believes that the Moros, descendants of the Malay pirates, who have resisted every effort of the Spanish and Americans to civilize them, can be reached in the same way. In Mindanao and Jolo the Moros have been reached to some small extent by dispensaries, but the great bulk of the population stands in need of medical service.

The new Michael Meager Charity Hospital, erected at Texarkana, Tex., at a cost of \$125,000, has recently been put into service. The institution was made possible by a bequest to the city of Texarkana from the late Michael Meager, a pioneer and railroad man, who was mysteriously murdered at a railway station in San Antonio, Tex., seven years ago. It will be conducted by the Sisters of Charity of the Incarnate Word, of Galveston and Houston, Tex., who have leased the building for five years.

A new \$100,000 orthopedic hospital, erected at President street and Brooklyn avenue, Brooklyn, N. Y., by the House of St. Giles the Cripple, was opened October 1. The building, which is a handsome four-story structure of tapestry brick and of romanesque architecture, is arranged to accommodate 55 patients. Dr. B. B. Mosher is at the head of the medical staff. The House of St. Giles maintains a large establishment at Garden City, L. I., and the new hospital is an auxiliary calculated to meet a well-established need in the Brooklyn district for a hospital for crippled children.

According to an expert accountant employed to examine the books of the several Milwaukee county (Wis.) institutions, maintained at Wauwatosa, more than \$80,000 has been saved in the last year by a change to the single board plan of management from the plan of having a separate board for each institution. The saving is credited to buying in large quantities, the elimination of overhead expense by combining the institution farms, and more comprehensive management generally. The old practice of transferring left-over appropriations from one year to another has been discontinued.



Conducted by MICHAEL M. DAVIS, Jr.,
Director of the Boston Dispensary.

Please address items of news and inquiries regarding Dispensary and Out-Patient Work to the editor of this department, 25 Bennett street, Boston, Mass.

Dispensaries Growing in the Southern States

A few months ago an account was given in this department of the growth of dispensaries in Memphis, Tenn., where the Associated Charities, under the leadership of Mr. J. P. Kranz, the general secretary, established a clinic, which in two years has grown to be a considerable size and to be an important factor in the care of the sick in that city.

MEMPHIS LEADS

Very recently the Associated Charities and the Medical School of the University of Tennessee have decided to affiliate in their dispensary work. All the technical medical work passes under the university control, while the social service work is all under the control of the Associated Charities. The two agencies are to work jointly on all questions of community needs. It is interesting to learn that this clinic had a total attendance last year of 6,000 patients, and reports that 80 percent of the patients were white and only 20 percent colored.

CHATTANOOGA FOLLOWS

One good thing leads to another. It is natural that in other cities of the South this example of leadership should find followers. In Chattanooga, Tenn., the Associated Charities, acknowledging its obligations to the dispensary at Memphis, has set under way a similar development. A statement from its superintendent, R. S. Hudson, may be quoted:

"Until about two years ago there was no dispensary or nursing work in the city other than that done by the Metropolitan Insurance Company. At this time we put on a district nurse. She visited only those families under the care of the association. About a year ago we began planning the establishment of a clinic and dispensary. For months we talked, pleaded, planned. After much discussion a group of society ladies became interested, and through them we organized the clinical department of our work.

"About April 1 of this year we opened the Chattanooga Free Clinic, which is a department of the Associated Charities. Serving this clinic we have a staff of sixteen physicians, changing the staff each six months, making a total of thirty-two physicians who are serving us. Each of these is serving without charge. In connection with the clinic we have established our own pharmacy, having found it wise to employ a pharmacist, who spends two hours each day in the dispensary. We have made up many of our prescriptions in bulk, furnishing each physician with the formula as well as a list of the drugs in stock, thus endeavoring to have them prescribe only such as we may have.

"The nursing service is not what we want yet. We have invited our general hospital to put, as part of their course of training for nurses, three months' service under this department of medical charities, and we have had two nurses from the senior class with us. One of them now expects to make district nursing her life's work. Our colored help we secure, as part of the training of the domestic science department, of the colored high school, having each girl detailed

to come to the clinic, spending two hours per day learning the best way to care for a sick room, the simple measures in caring for a patient, etc. From this we have had one colored girl go into our general hospital in order to learn more, and plan for such to go to some hospital which has a colored training class.

"Our work is separate from our relief department, yet it is, in fact, a part of our organization. The finances of this department of medical charities have been raised very largely by the young society girls of the city. There is an organization of these young ladies, which gives each year some special charity play, netting something like \$1,500 to \$2,000. This fund is turned over to our department. We receive a small monthly appropriation from the city. The Associated Charities, out of its regular budget, cares for a nurse's salary. We are so closely related to the city, the Associated Charities, and the ladies' organization, that it is hard to tell just where we do belong.

"We have a governing board, consisting of representatives from our city and county boards of health, the medical society, and other organizations interested. This board, of course, leaves all administrative work to be done by this association. Our offices are located in the City Hall. We have been able to have the city build four or five rooms in the basement for the clinic, this, of course, being paid for out of the city treasury. We have, therefore, no light, heat, water, or rents to pay."

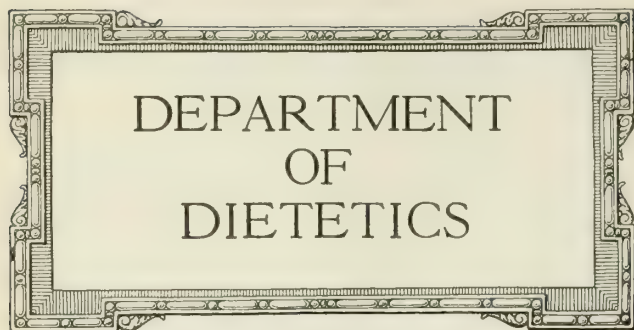
ARKANSAS GOES TO IT

Again, in Arkansas the city of Little Rock has taken a step closely paralleling that in Memphis. The City Hospital in Little Rock has conducted a dispensary for several years, but the medical department of the University of Arkansas started a dispensary two years ago, and this has grown so that it overshadows the older dispensary. With a progressive spirit at the helm, it has been decided to push forward those features of the clinic which were of special service to the community. An arrangement has been entered into between the university clinic and the United Charities' Association of the city by which the secretary of the United Charities Association takes charge of the social service department of the college. This autumn a new dispensary and clinic are to be built, and all of the clinics of one kind will be coordinated and will work under one administrative supervision. The United Charities have already conducted a baby clinic and an antituberculosis clinic, and these are to be combined with the other clinics in the larger unity which is now brought about. The United Charities provides visiting nursing and social service.

TEXAS, TOO

Moving again a step westward, developments in San Antonio and El Paso, Texas, may be noted. In San Antonio the Associated Charities has taken no official part, but under the department of health of the city a rapid development of dispensary service has been shown. Four years ago it was reported that there was an average dispensary clinic of about 30 patients per day connected with the City Hospital, and today the number of patients per day is three times as large, and new buildings for the hospital and out-patient department are under construction, wherein it is expected that the attendance will be still greater. Even in the temporary quarters which are now occupied the number sometimes reaches 150 in a day. This service is connected with that of the city physicians of San Antonio, who pay calls at home on patients who are too sick to come to the clinic and who are too poor to pay.

A new tuberculosis sanatorium erected at Wabasha, Minn., by Wabasha county, has recently been opened, with Miss Ruddick, an experienced tuberculosis nurse, in charge. The plant represents an expenditure of \$40,000, of which the state contributed one-half. Persons living in the county and able to pay for treatment will be charged \$7 per week; those outside of the county, \$10 per week. County patients unable to pay will be admitted free, and the county will be reimbursed by the state to the extent of \$5 per week for each such person cared for.



Conducted by MISS LULU GRAVES,
Dietitian of Lakeside Hospital, Cleveland, Ohio.

Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, Ohio.

Dr. Langworthy's Helpful Paper

We are very much pleased to be able this month to give to our readers Dr. Langworthy's paper. The work Dr. Langworthy has done and is doing in the office of Home Economics is so valuable that we are always glad to hear about it; his knowledge and experience are so great, and he is so conservative in his statements, that we like to hear anything he has to say about food or any of its phases. While this paper was written more specifically for the housekeeper, much of it applies equally well to the institution.

This department has tried to put emphasis on the fact that the preparation and cooking of food materials is of the greatest importance, and the manner in which this is done may add to or detract from the value of the finished product to a very great extent. Dr. Langworthy makes this point in a way that cannot be questioned, and yet he does not make the one in charge of the kitchen feel that its management is necessarily a burden.

His suggestions to housekeepers are just as applicable to one in the kitchen of an institution as they are to one in the kitchen of a home, and through it all we readily see the decided advantage of having an intelligent person control the feeding of our people.

Do not fail to read what Dr. Langworthy says about the attitude of the family toward the well-selected menu. If we could have the same care, attention, and intelligence given to our dietary department that is given to other departments in the hospital, and then have the same consideration and cooperation given to it that are given to the other departments, we would find hospital life much more satisfactory for everybody concerned.

Food Selection for Rational and Economical Living¹

BY C. F. LANGWORTHY,

Chief, Office of Home Economics, State Relations Service, United States Department of Agriculture.

There are a number of factors which should be taken into account when one discusses diet with reference to its adequacy and economy, and to the satisfaction which it gives. Among these are a knowledge of local markets and standards of food quality; wise selection of food; preparation and cookery; and the planning of meals, or, as it is so commonly called, "menu-making." The last of these is by far the most important, and will therefore be discussed at the greatest length, though the others logically precede it.

¹By permission of the Scientific Monthly, where this valuable paper was first published.

By a knowledge of markets is meant not only knowledge of the location of butchers, grocers, and other dealers in food in one's neighborhood or town, but also a good idea of the reliability of the different dealers, the quality of the goods which they offer, the relation of the cash or credit system of selling to their prices, and other such things. To be complete, it should also include some understanding of the production and distribution of food materials; such information, for instance, as would lead the housekeeper to purchase local-grown goods when possible, not only because they may be fresher, but also because of the difference in their favor of transportation charges, and hence of price. With respect to the quality of foods, the housekeeper should know, for instance, how to distinguish old and young poultry, and tough, overfat, or overripe meats; she should know the relative merits of wilted and fresh vegetables, being able to tell when the former can be freshened or when they include too much inevitable waste to be economical. Other illustrations might be cited, but these are sufficient to show what is meant. A knowledge of markets and of quality of food products as related to final value calls for a wide range of information, much of which can be taught and some of which must be gained by experience.

Wise choice of foods involves possession of other lines of information and experience, which enables the housekeeper to purchase to good advantage. She must realize that out-of-season foods, like strawberries or green peas in January, will be more expensive, and no more nutritious, than the same foods in early summer, while foods which are uncommon at all times, like fresh mushrooms, will be more expensive than cabbage or carrots, which they closely resemble in nutritive value. She may select according to her circumstances, but she should do so "with her eyes open," and not in the belief that the superior virtues belong necessarily to the rare or the unusual.

Then, too, one must take into account the quantities which can be handled advantageously in the home. It is the part of wisdom to purchase in quantity those supplies which can be easily stored and kept without deterioration, while such purchase would be decidedly unwise in the case of perishable foods, or if there are no proper storage facilities. One must take into account further the ability of the person who cooks to make acceptable dishes from the foods supplied. If she does not know how to make a palatable pot roast or similar dish from a tough cut of beef and does not know how to broil a steak well, there may be some economy in choosing the steak. The suitability, with respect to the needs of the individual family, of the food purchased is another important consideration. Thus, a good deal of waste comes from the purchase of meats which give too large cuts for the family tastes. For instance, if the chops purchased are so large that the individual portion which would be served (usually one large or two small chops) is larger than the eater's average appetite, part of the meat may be left on the plate and thrown away. The housekeeper, therefore, should take pains to provide materials which can be served in portions to "fit" the family tastes.

The relative amount of time, labor, and fuel which is required in preparing foods for the table has a decided influence on actual as compared with apparent cost. The busy housekeeper who wishes to prepare breakfast quickly may recognize this when she pays a higher price per pound for some ready-to-eat cereal, which at most requires only to be warmed before serving, instead of buying a breakfast cereal costing less per pound, but which must be cooked for several hours. If she prefers a cereal which

needs longer cooking, she should know that she can begin to cook it when the evening meal is prepared, and finish it either in the fireless cooker or while she is preparing breakfast the next morning. The more she appreciates and acts on such considerations, the more likely she is to provide a satisfactory diet which is also an economical one.

Cookery and other matters pertaining to the preparation of food for the table are particularly important from the standpoint of economy and satisfaction. Here, as elsewhere, knowledge of the "art of dressing food," to use an old phrase, is very important. It may be learned by experience (usually at much cost), or from the mother or other members of one's family, as has been the rule in the past, or, like other arts, it may be learned in school, as is increasingly the case under the changed conditions of the present day. The housekeeper needs such knowledge, whether she applies it herself or whether she directs some one else. If, in addition to the art of cookery, she understands relative food values and other technical matters pertaining to food and its uses, her task of providing a rational diet will be the easier.

She should not be parsimonious in her household management, neither should she be extravagant, and to this end she should understand and practice rational economy. She must realize, for instance, that a large amount of garbage means needless waste, due to carelessness, to excessive purchase, to overgenerous service, to poor cooking, or to menus which do not please the members of the family. She should be familiar with economical practices and usages and with practical ways of saving materials, having wisdom to make use of those which are really worth while and to avoid those which merely seem economical. As an illustration, it is possible to be economical in the use of fat and yet keep up a good standard of living. This implies careful use of the fats purchased for the table and for cooking, and also the use of fats commonly thrown away. The proper "salvage" and use of chicken fat, rendered suet, bacon fat, and other fats commonly wasted, which are, so to speak, byproducts of raw materials or of cookery, will enable her to economize in the amount of butter and other fats purchased as such. She may take a hint from the commercial baker, who realizes that stale bread and cake, dried and ground, can replace about one-fourth of the flour used in making many kinds of cookies, cakes, and other foods. She must appreciate the importance of careful preparation of food materials, and recognize that thin paring of fruits and vegetables is less wasteful than careless paring, and that soaking dried foods, like navy beans, dried peaches, etc., before cooking them economizes fuel by lessening the time of cooking required. She must know that it is possible to make palatable, yet economical, dishes by extending the flavor of some more expensive food through a fairly large proportion of a cheaper food of blander flavor, as is done when a small amount of meat is combined with a large proportion of potatoes, carrots, and other vegetables in making a meat stew. On the other hand, she should see that it is poor economy to use a pint of cream and several eggs to save a cupful of cold boiled rice or farina which might better go into the soup kettle.

The last factor—namely, the planning of meals—is very important and places a great responsibility on the housekeeper, since it determines whether the diet provides the body with all the materials it requires. It is a problem which is often well solved by the housekeeper on the basis of empirical or other knowledge, but which is almost certain to be wrongly solved if such knowledge is lacking; certainly it is one regarding which there is much

ignorance and many misconceptions. At one extreme are those, and they probably represent the great majority, who consider their meals only in reference to palatability—a selection which may be rational if they have learned good food habits, and fortunately there is much empirical teaching on food habits which is sound. At the other extreme are those who heed all the fantastic statements they come across regarding specific medicinal or even semi-magic virtues ascribed to certain foods, who place their hopes in some particular type of food materials, or who fear lest they may suffer by "eating incompatibles," and so on through the long list of dietetic fads and fancies. Many, however, are not long deceived, their common sense warning them that, if such doctrines were true and important, the race could hardly have survived its alleged dietary indiscretions. Between these extremes stand a rapidly increasing number who seriously desire to understand and apply the principles of dietetics as they are now expounded by the more generally accepted authorities.

A fundamental principle is that the diet, considered for any reasonable length of time, must supply a great variety of chemical substances combined in different ways for the "structural" needs of the body, and also must supply it with energy-yielding substances with which it may perform internal and external work. It seems apparent that a varied diet, reasonably generous in amount, is more likely to meet the body needs than one restricted or unvarying in its makeup or scant in quantity. The more knowledge and judgment used in its selection, the better the diet is likely to be.

In discussing diet, the expression "balanced ration" is often used, no doubt because it occurs so often, and to such good purpose, in discussions of animal feeding. Those who employ the term should remember that the feeder of live stock not only selects the kind of food which the horse or the steer is to eat, but measures the quantity. The housekeeper, the physician, and the nurse do this for the infant, and sometimes for the person who is ill or otherwise compelled to live under circumstances in which the diet is definitely controlled. The housekeeper does not do this when under normal conditions; she provides a meal for her family to select from and eat of at will. Such freedom of choice is compatible with rational living, and should for the best ends be accompanied by rational food habits which can be early taught in childhood, or, if need be, acquired later in life. Therefore, the term "balanced" is, and is likely to remain, inaccurate for general discussions of dietetics, and the term "well-selected" should be given the preference.

The character of the meals which the housekeeper will provide is determined largely by racial and regional influences, and also by fashion. In the United States the general character of the diet is like that in the British Isles, with many minor modifications contributed by the other races which go to make up our population. Thus, we have meat, with potatoes and one or more vegetables, and a dessert for the simple dinner, with the addition of soup and salad for a more elaborate one. As an example of foreign influence may be cited the serving of macaroni and cheese as one of the vegetables at dinner, or the use of sauerkraut with pork.

The influence of fashion or custom is shown in such a matter as the preference for a meal of a given type; for instance, the continental breakfast of rolls and coffee in comparison with the English breakfast of jam, toast, eggs or meat, and tea; of the American breakfast, of which fresh fruit and breakfast cereal so commonly form a

part, usually accompanied by more hearty foods. We may prefer one type or another because we have always known it or because we have learned to like it, but the whole matter is chiefly one of custom, and it is the same way with other meals. Fashion also governs quite largely the choice and the combinations of foods for a given meal; for instance, there is no inherent reason why peas should be served instead of string beans with lamb, or why we should serve apple sauce with pork and current jelly with mutton rather than the other way around. We instinctively follow conventions, but we must not overlook the importance of so following our preference that we get distinct variety from meal to meal and from day to day. The housekeeper who thinks about such matters will realize that serving sweet potatoes, white potatoes, Hubbard squash, and boiled rice at the same meal shows "poverty of invention," since she will realize that they are somehow alike, even if she does not know that all are characterized by the presence in relatively large proportion of carbohydrates. Nor would she be happier in her choice if she served such a combination of green vegetables as spinach, asparagus, cabbage, and cauliflower, since all are similar members of the green vegetable group. Most palates would be better pleased if she had scattered her dishes through several days, having white potatoes and spinach, for instance, on one day, asparagus and sweet potatoes on another day, and so on through the almost endless number of combinations of which the food list permits, and had included in the menu such other types as seed and fruit vegetables (green beans and peas, tomatoes, cucumbers, green corn, melons, and so on). Not only would this be more pleasing to the person with discriminating taste, but it would also be more desirable from the standpoint of the rational selection of foods, since a person would be more likely to secure all of the food constituents which he needed from a mixed meal than from one of such sameness.

Furthermore, a survey of the available data on the subject of meals leads us to believe that it is possible to classify them into two distinct types (though admittedly this is only a very rough division)—namely, those which, for want of a better term, may be called the "hotel" or "restaurant" type and those which may be called the "family" type. In the former the principal dish chosen is likely to be a meat order, which may carry with it a moderate serving of potato, and which is supplemented chiefly by bread and butter and possibly dessert, and less often a green salad, but which usually does not include a generous order of vegetables. In the second, or "family" type of meals, the amount of meat served is likely to be smaller and the proportion of vegetables served very much larger, with dessert and bread and butter as well. If we follow the rapidly gaining theory that foods like meat, which yield an acid residue when assimilated, should be accompanied by a generous amount of foods like vegetables and fruits, which yield a distinctly alkaline residue when assimilated, the wisdom of the so-called household type of meal is apparent. We shall find also, if we consider its chemical composition and energy value, that it is more likely than the other type to supply in reasonable proportion the necessary building and repair material and the energy-yielding substances required.

The number of meals taken in a day is significant chiefly as a convention or fashion. With the reasonably generous breakfast of the American family, the lunch or supper is likely to be moderate and the dinner generous. On the other hand, it is natural enough that, with the light breakfast of continental Europe, there should go either

the second breakfast and supper or the hearty lunch as well as the dinner. Apparently the number of meals taken does not greatly influence the amount eaten per day, for the man who goes without his breakfast is very likely to make up for it at dinner or supper, while the man who eats an early breakfast and then a second breakfast will be likely to take a moderate lunch or a light dinner. Good food habits do not permit of gluttony.

The housekeeper who tries to provide a varied menu should realize that, in general, variety can be secured in two ways—either by using a considerable number of dissimilar food materials or by using varied methods of cookery with a smaller number of food materials. While both methods have their uses and both should be taken advantage of, it is well to remember that the first is the one more likely to provide variety from a chemical standpoint.

As regards the amount of food required, satisfaction and rational living demand that the amounts provided should be adequate, while economy demands that the amount should not be so great as to lead to overeating or to needless waste. It may seem generous to serve a person more than he can eat, but it is not wise, since it means material left on the plate, only to be thrown away. It is better to give a smaller serving and offer a second helping. Proper care in such matters as well as in the selection and preparation of food should mean a considerable saving. The possibility of saving is made clear by the fact that the waste observed in studies of several hundred American families ranged from practically nothing to 20 percent of the food purchased.

It is also apparent that good dietary habits are important. These can be taught and are best learned in childhood. We should not allow children to grow up with whims, fancies, and aversions respecting their food. They can be taught to like all the ordinary foods, and this should be done unless it becomes apparent (and this rarely happens) that some article of diet is distinctly harmful because of an idiosyncrasy toward it.

[To be concluded in December issue.]

White Bread as Food

DR. J. A. WESENER, Columbus Laboratories, Chicago.

An article appeared in the *New York World* under the heading, "Don't Feed Him White Bread." This, like many articles and stories in the newspapers, was evidently intended to be more or less sensational in its character, and without regard to actual truth, or more than superficial facts.

The article contained the following table, which is supposed to give the comparative food values of the several articles named:

Barley bread	83.3
Whole wheat	81.7
White	64.9
Rye	67.2
Swedish speise bread.....	87.0
Zwieback, white	85.2
Zwieback, rye	83.7
Macaroni	86.9
Corn	80.0

It will be noted that in this list white bread is put the lowest, rye bread slightly above it, bread from barley much above it, with corn and whole wheat meal near the latter. There is probably a nearer approach to the truth in the value given to zwieback, Swedish speise bread, and macaroni (the latter meaning, of course, the material as it is purchased, for these in their preparation are made

nearly free from water, and contain little beside the dry food matter).

White bread, as it is ordinarily made, contains from 35 to 45 percent water, and, if it did not contain that water, it would be dry and harsh to us, and wholly unsuited for use in the manner in which bread is ordinarily consumed. We know it is there when we purchase the bread, and the price is made accordingly. We know zwieback and macaroni to be practically free from water, and purchase them at a correspondingly higher price, for we ourselves can supply the water at a low cost. They are distinctly different from bread, and, for the most part, they are used in a different way. Swedish speise bread, or hardtack, is useful in war times, but is not much sought after by those who can get white bread to eat.

The composition of any prepared article of food depends on the composition of the materials put into it. The composition of wheat bread, rye bread, corn bread, or bread from barley depends for the most part on the composition of the flours from these grains. The following table shows the relative composition of these several flours, and also that of oatmeal, which is largely consumed in this country. It is not generally made into bread, but is consumed in another manner. Oatmeal is especially rich in fat and protein because it contains the entire kernel of the oat after the husk has been taken off. The several flours given do not contain the bran and the germ, so that a considerable part of the proteid matter and the fat has been removed:

	Wheat	Rye	Corn	Barley	Oatmeal
Moisture	13.00	13.00	13.00	13.00	8.00
Ash	.45	.75	.50	.90	2.00
Protein (gluten), etc.....	.50	7.00	6.00	7.50	15.00
Fat of oil.....	1.10	.85	1.30	.90	7.00
Crude fiber	.25	.40	.80	.70	.90
Carbohydrates (starch), etc.....	74.70	78.00	78.40	77.00	67.00

An explanation of the terms used in the table showing the composition of these different flours may be necessary to an understanding of them on the part of some readers. All flour, however dry, contains some moisture, the average amount being about 13 percent. The amount of moisture is subject to considerable variation, and the percentage of actual food constituents of the flour varies with the amount of moisture which is present. In the analyses given, which represent closely the several articles as they are to be found on the markets at the present time, the amount of moisture for all is taken to be the same. The ash represents the mineral matter, the amount of which varies with different flours, and is always less in the better grades of flour than in the poorer grades. It is also less in all grades of flour than it is in the entire grain, for the greater proportion of the ash occurs in the bran. It is the bone-forming constituent of the food. A certain amount of it is essential to the growth of the animal, but in most all foods there is an amount far in excess of what is required by the animal or person consuming the food. Protein is that constituent of foods which has sometimes been called the muscle-producing portion of the food. Lean meat is made up almost wholly of protein and water. The white of an egg is protein and water. The best representative of protein which we have among vegetables is the gluten of wheat flour. All natural vegetable foods contain a considerable proportion of protein. The amount varies with the kind of article, and with the special conditions under which it has been produced. The gluten of wheat flour varies from 6.5 percent to 12 percent or more. It is highest in the hard winter and spring wheat flours, and lowest in the soft winter wheat flours. It is also higher in the low grades of flour than in the better grades.

It is possible there is no other grain which is subject to such great variations in the amount of protein which it contains as wheat, and especially wheat flour.

All the grains contain some oil. The amount in wheat flour is about 1 percent. The amount in the entire grain is considerably above this. The woody matter of the bread is separated out in the course of analysis as crude fiber. It has comparatively little food value, and is not very desirable in most foods which are designed for man. A certain amount of crude fiber is essential for the domestic animals, especially cattle and horses, as it gives bulk to their foods.

Under the name of carbohydrates are grouped together certain other constituents of food which are not classed among the ash, protein, fat, and crude fiber. In the flours these consist chiefly of starch, with a little sugar. Those constituents of vegetable foods which are considered to be of most value are protein, oil and starch.

In wheat meal (sometimes called graham flour) there is a considerable amount of woody matter, and consequently much more crude fiber than in the flour. From 15 to 20 percent of the wheat grain is bran, and bran contains a very large amount of indigestible matter. Part of this separates out as crude fiber in the process of analysis, and part of it separates out as carbohydrates other than starch. There is also a larger proportion of protein in the whole wheat than in the white flour, and more mineral matter. The fiber portion of the bran is of little value as food. Those carbohydrates of the bran other than starch and sugar are of comparatively little value as food. Much of the protein matter is so incorporated in the woody fiber that it is not digested and made available for the use of the body. The amount of ash is in excess of that required for building up of bone and for supplying other necessary minerals to the body. For these reasons a large portion of wheat meal is not suitable as a food, and it is this very material which is removed in the process of making wheat flour. Not over 90 percent of the dry matter of wheat meal is digestible and a source of nourishment to the body. Nearly the whole of the dry matter of wheat flour is available for the use of the body. This is true not only of the white flour of wheat, but also the white flour of rye, corn, barley, oats, etc.

The amount of oil and mineral matter in the flours of the different grains does not vary greatly. The chief difference in their composition is seen to be in the relative amounts of protein and starch which they contain. It will be seen from the above table of analysis that wheat flour contains much more protein than either rye, corn, or barley. The bread flours—namely, the spring wheat flours and the hard winter wheat flours—nearly always contain upward of 10 percent protein. Protein has been looked on as one of the most valuable constituents of food, because many of the foods which we consume are comparatively poor in this constituent, and because the body requires a certain amount of protein to keep it in proper nourishment. It has been considered that the proper amount of protein in proportion to the carbohydrates is about 1 to 6, varying for different individuals with the character of work which they are doing and other conditions. Wheat flour gives the nearest approach to this proportion of any of the grains. It is true there is a larger proportion of protein in the bran, but, as stated above, a considerable portion of this is not digestible. We may also add that many people do not like brown bread, and that the coarse material of the bran produces a mechanical irritation of the intestines, which makes it unsuited as an extensive article of food.

White flour has been the predominant article of food among the most civilized people for a long time, and undoubtedly will continue to be. Any deficiency in protein or in any other food constituent is supplemented by the use of other foods. Meat and cheese supply protein and fat. Beans, peas, and vegetables of this character are rich in protein, containing often as much as 20 percent of their entire weight. Eggs also are made up for the most part of protein. Butter supplies any additional fat that may be required, and by the use of these articles, in connection with the bread, the body is well supplied with nourishment in which the proteids and carbohydrates are held in proper proportion.

Where bread is made with milk, its food value is materially increased over what it is when made with water. Bread and milk is a healthful and nourishing diet, but we would soon tire of bread and milk alone, just as we would of any single article, however perfect it might be as a food. The almost universal inclination of man to select a diet which consists largely of white bread may be taken as strong proof that it is a valuable and desirable article to put upon our tables.

A Chef on Unwholesome Meats

Meat may be injurious to the health of the consumer from many causes, such, for instance, as: (1) it may be the vehicle through which pathogenic organisms are introduced into the body; (2) it may contain the intermediate forms of certain parasites capable of developing in the body; (3) it may give rise to ptomaine poisoning.

Among the infective diseases which might be transmitted by the eating of contaminated meat, tubercle, on account of its prevalence, must take the foremost place. Tuberculosis is rarely found in the muscles, but, if not discovered there, nevertheless in apparently healthy flesh the lymphatic glands which lie embedded in it are very often affected with this disease, and it is doubtful if the process of cooking such meat is sufficient to destroy the tubercle bacillus in such positions. This organism does not possess a very great degree of resistance to high temperature, and the higher the degree of heat the shorter time of exposure required to destroy it.

Cysticercus cellulosea in the pig and *cysticercus bovis* in the ox may, if the flesh of these animals be eaten in a raw or imperfect condition, develop into adult tapeworms in the human intestine. The pig sometimes harbors the *trichinella spiralis*, which gives rise to trichinosis if ingested in the live condition, but, when meat is properly cooked, the danger from these parasites is slight.

Meat poisoning occurs as the result of some abnormal condition of the animal before slaughter.

LEON PESCHERET,

Chef Cook County Infirmary, Oak Forest, Ill.

Miss Eckman's New Field

Miss Rena Eckman, dietitian at the Massachusetts General Hospital for several years past, has resigned her position and is to spend the coming year taking a course at Teachers' College, Columbia University. Miss Eckman has done much valuable work in dietetics, the results of some of which have been published in THE MODERN HOSPITAL. She is now to have some new experiences, and opportunity to go on with a new and perhaps broader viewpoint in mind.

It is greatly to be hoped that Miss Eckman will give the readers of THE MODERN HOSPITAL the pleasure and profit of following her in her new environment. She should have much to write about that will be worth while.

REAL COMMUNITY HOSPITAL SERVICE

West Virginia Institution Carries Out Health and Emergency Work at the State Fair

For two years past the Ohio Valley General Hospital, Wheeling, W. Va., has conducted an emergency hospital and rest room at the West Virginia State Fair, which is held early in September at Wheeling. This year, although the work was conducted on a scale much larger than last, the tents provided as rest rooms were always crowded, and the emergency room was used repeatedly. The president of the hospital's alumnae association was in charge, and, with the assistance of six or eight other graduates, was kept very busy.

In the rest room, bassinets and cribs were provided for the babies and young children, with a trained nurse in charge, so that the mother might check her child and enjoy the fair unhampered. In addition, certified milk was provided free of charge, and an attempt was made to instruct the mothers in the proper care of the children as to feeding, clothing, etc., and, to aid in this, the walls of the tent were hung with charts demonstrating various methods of feeding and containing catchy mottoes.

In the emergency room such cases as the following were treated: 2 sprained ankles, 1 torn ligament and disloca-



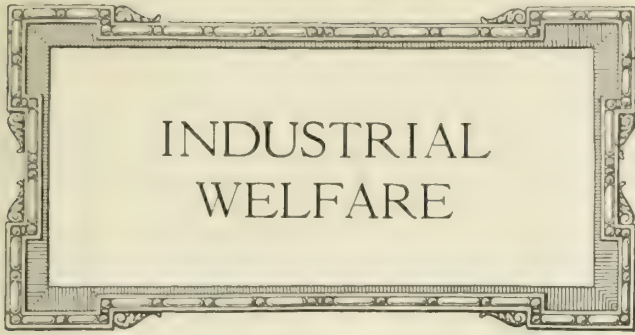
Rest room and emergency ward conducted by the Ohio Valley General Hospital at the West Virginia State Fair.

tion, 9 fingers dressed, 1 fractured shoulder, 2 head cases (stitches taken), 12 hand dressings, 1 sprained shoulder, 3 massage treatments, 1 case delirium tremens, 20 cases of headache, 1 epileptic, 3 cases of fatigue, 3 lost children.

A branch rest room was conducted in a distant part of the grounds, although no emergency work was attempted at this point. The whole scheme was undertaken to show the public that the hospital is ready at all times to assist in matters of health, and was on the job in an emergency. There was absolutely no charge for any of the work undertaken. This brought pertinently to the minds of a large number the fact that the hospital was doing constantly a large amount of charity work, and will result in a more cordial reception of the hospital's appeal for funds for its charitable expenditures. This hospital has appealed so often to the public for large sums that it was felt this was an opportunity to show the public it appreciated the help which it had received, and in return was ready to assist to the limit of its ability.

Judging from the many hearty comments, not only from the patrons, but from the directors of the fair association as well, the venture was a real success, and will doubtless be repeated each year with an increased space and equipment.

PLINY O. CLARK, Field Editor.



WORKING ON THE UNCUT DIAMOND

* * * *

Saxon Mills, Spartanburg, S. C.

BY MARJORIE A. POTWINE.

Welfare work will bear permanent results in the next generation and in the maturity of the youth of today. The majority of middle-aged mill operatives and homekeepers in a typical southern mill village are of country and mountain stock, bred in an environment that has molded inflexible character, and physically developed where sun and storm, muscular work and simple living, have toughened muscles and hardened constitutions to meet the demands made by that life.

Such a livelihood may be irksome and unremunerative, pregnant with illiteracy and barren of social opportunity, but certain it is that it develops the physique and strengthens it to cope with the conditions among which it must exist. I do not speak in the extremes of the clay-eater and mountain clan; I confine myself absolutely to the typical mill operative, who has come from an impoverished rural district to secure ready cash for his labor and to give his family the advantages of an organized community life. With this man and his wife, welfare work accomplishes little of permanent value. Their habits are as fixed as the rocks among which they were formed, and, while many of their methods may be antiquated, for years they have known how to do those things essential to feeding and clothing the body. Most of them go a few steps farther; they take pride in their milk and butter, they know how to garden well, they air the bed-clothes daily and plant roses by the doorstep. In their rural lives there has been time for these things. In the busier lives of their children as mill operatives there is little chance or interest for gardening or homemaking, unless this interest is stimulated by some agency such as welfare work.

I believe now is the time to take hold of that situation. Due to the recent introduction of the cotton mill industry in the South, most of the youth here are children of the sturdy country stock I have mentioned. The need for and the response to welfare work among the younger generation would formulate into a beautifully balanced ratio. By need of welfare work I do not mean that here exists poverty, sickness, degeneracy. I mean that this is the very time to prevent race deterioration, and to develop this good old native stock through education, recreation, and sanitary living and working conditions into a strong, well-balanced working class, typically American, and holding dear the traditions and the interests of no country other than America.

I believe the following is a sound theory to work on if that is to be accomplished: better bodies make better minds, better minds make better morals, and the three developed in combination are the strongest safeguard to the race.

Direct work for health is the purpose of the home-

makers club, an organization of married women who take special interest in the welfare of the village. They report cases of illness, offer aid, support the community linen chest from loans that are made in cases of need, and secure lecturers to address them on questions of health.

The company has a first aid to the injured outfit, but up to the present time there have been few emergencies demanding its use.

Living conditions and health guidance must be supplemented by wholesome exercise. Outdoor recreation is a specialty at Saxon Mills. There is volley ball for every one, and the enthusiasm of the girls and women is astonishing. Field hockey was played all winter by the men, but now baseball has taken its place. Croquet, tennis, basket ball, gardening, swimming, and the girls' walking club will fill the summer program of outdoor activities. The playground surrounds the community building, the first floor of which is used as a school house, and their proximity to the mill gives everyone an opportunity to use them. They are lighted at night for two hours' enjoyment, and I believe that time in the open, exercising and playing, makes the operative a happier and better equipped individual, whose night's rest is better because of his recreation.

The community building is fitted to meet all the social needs of the village. In it are an auditorium that seats about 500, a lodge hall, a library of 625 volumes, a reading room, a game room, a sewing room, and a basement fitted with showers and room for domestic science laboratory. Lectures, entertainments, game night, and sewing classes are well attended, and evidently much appreciated.

EMPLOY REGULAR VISITING NURSE ASSOCIATION

* * *

Simmons Hardware Company, St. Louis, Mo.

Mr. R. H. Burton, of the company, furnishes the following epitome:

In our establishment in St. Louis we conduct a jobbing business, and we are fortunate in not having hazardous employment, our accidents consisting principally of nail punctures. Our house physician, Dr. George W. Koenig, has his office within a short distance. Through the munificence of Mr. George W. Simmons we have coupons entitling persons to treatment in the Barnes Hospital, of this city, and on several occasions we have sent our people there for medical treatment, but these cases did not arise from any accident.

We have an emergency ward, where an employee may lie down and rest if he or she should be taken ill from any cause, and in such case prompt attention is furnished by our house physician.

Our ladies' lunch room is conducted on a cooperative plan, and most of the girls bring their lunches from home, to which they may add coffee, which is sold at actual cost—2 cents per cup. Our matron also provides other edibles, such as sandwiches of various kinds, which are sold to the young ladies at cost. Some of the young ladies are quite regular in their attendance in our lunch room, but this is not obligatory, and they go up town for their lunches quite frequently, our experience being that our lunch room is used mostly during bad weather.

Our employees have formed a loan association for the purpose of having a fund that may be available in case of any emergency that may cause an employee to borrow money. Applications for loans are made in writing, and are passed on strictly according to merit.

If any employee is absent more than one day without

notifying the company, we investigate the cause, but we have no reason to employ a visiting nurse, as we have an arrangement with the St. Louis Provident Association whereby a visiting nurse will be furnished if deemed expedient, and there are one or two old people pensioners whom we give attention through the visiting nurse of that association. Our experience has shown that no specific rule can be followed in treating cases of sickness or distress, as each case must be treated according to its merits.

EMPLOYEES MANAGE THEIR OWN WELFARE

* * *

Gordon & Ferguson, St. Paul, Minn.

In a large manufacturing plant like that of Gordon & Ferguson, where about 500 expert operators are employed in the manufacture of furs, mackinaws, and sheep-lined coats, adequate welfare work is a paying investment from the standpoint of more efficient work on the part of the employees as well as from the viewpoint of their physical and moral conditions.

The employees of this firm have maintained a benevolent association for a number of years. The association is managed by employees, and is supported by small monthly assessments, with nominal assistance from the firm. It pays sick and death benefits, and is in a very prosperous condition.



Fig. 1. Gordon & Ferguson, St. Paul. Corner of one of the retiring and locker rooms.

When the firm planned its new building a few years ago, the needs of the employees were carefully considered and adequate space was provided for welfare work. In arranging the factory floors, the matter of light, air, and space was given special attention with the idea that men and women working under proper hygienic conditions, with plenty of room and the best light and ventilation, could attain the highest efficiency in their work and remain well and be happy. Space was provided for retiring rooms, with the best modern sanitary equipment, and also locker rooms, in which each employee is supplied with an individual steel locker. A small rest room, with necessary hospital supplies, was set apart for emergencies, and we are happy to state there have been very few occasions when its use has been necessary.

The cafeteria and lunch room is a large, well-lighted

and ventilated room, and is also used as an assembly and recreation room, being furnished with a piano and well-selected branch library. The cafeteria is operated by the Employees' Mutual Benefit Association, which buys its supplies and conducts the cafeteria as any similar well-managed enterprise is operated. A competent cook and assistants are engaged, and some of the factory girls "help out," with suitable remuneration. The equipment of the cafeteria is complete, and was installed by the firm and at its expense. Light, heat, and cooking steam is furnished to the association gratis, so that it is able to serve good, wholesome lunches at a very low charge. Any profits that may accrue revert to the association's general fund.

The firm found that the best results are obtained by permitting the employees to manage their own welfare work, giving assistance and guidance when needed and asked for, but allowing the employees to conduct their affairs after the proper equipment with which to work has been supplied.

REQUIRE MANY WELFARE FEATURES

* * *

Merck & Co., New York City

The company, manufacturing chemists, furnishes the data for the following epitome:

Our requirements are such that we find it necessary to make use of many welfare features, each one to a limited extent rather than to concentrate on any one feature extensively, and we are obtaining results that are highly satisfactory.

We are well organized into companies for fire protection and fire fighting. Our buildings are, of course, in addition provided with the latest devices for preventing and extinguishing fire. We have periodical inspections by our engineering force of all our machinery, elevators, general equipment, and all safety appliances, which includes inspection of all our fire fighting outfits as well. This inspection feature we regard as important. Our machines, pulleys, wheels, belting, etc., are provided with approved safety appliances. We have warning signs along our roads for the guidance of vehicles and pedestrians. Our employees are required to obtain written permission before entering rooms, tanks, etc., that might possibly be filled with objectionable odors or vapors. Each department is provided with emergency medicine cases for the purpose of rendering first aid in minor injuries. We maintain a first aid room completely equipped to furnish first aid and relief to the injured or sick. Suitable garments are provided for the protection of employees according to the nature of their work, which also aids in maintaining sanitary conditions for our products, and we endeavor to encourage cleanliness. We supply individual drinking cups, dining and rest rooms for women, lunch room for men, and lockers for all, and for recreation we furnish baseball grounds, tennis courts, etc.

The Frances Berrien Hospital, Rome, Ga., is having plans drawn for an additional story to its present building. The improvements, which will cost about \$25,000, will include a new operating room.



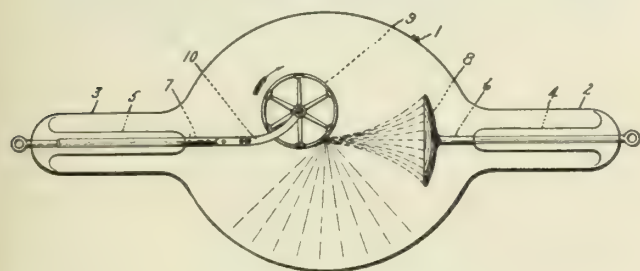
VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor.

Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

New Type of X-Ray Tube

Professor Elihu Thompson has recently patented an x-ray tube which has certain novel features in construction, principally in that the target or anode is continually changing, the object being to prevent overheating and melting of the metal as in the case of the ordinary tube. The anode as shown in the illustration consists of a rotating wheel having a comparatively broad band. This wheel is mounted with a tapered pinion, so that but very little pressure is required to turn it. As the cathode stream strikes the surface of the wheel, it automatically turns, thus continually presenting a new anode surface.

A tube has also been designed so that the wheel may be



Thompson x-ray tube.

turned by means of external magnet application. By attaching a neck to the x-ray bulb, the wheel is mounted on a long shaft, the end of this shaft carrying a steel disc. If a rotating magnet is operated around this neck, the shaft carrying the wheel will, of course, turn.

It is, of course, impossible to state whether this tube will be placed on the market soon, but it would seem that there are some features which would tend greatly toward prolonging the life of an x-ray tube, something which is always desirable.

Norwich Absorbo-Sheet

A very practical absorbent pad for obstetrical and other cases has recently been placed on the market. This pad is a combination of waterproof material, absorbent cotton, and surgical gauze. The entire combination makes a pad which is always ready for use, since it is sterilized. The sterilized gauze is in contact with the patient's body (unless the surgeon prefers to use a linen sheet), and serves the double purpose of affording cleanly comfort with the risk of infection reduced to a minimum, and at the same time it is slightly absorbent. The sterilized center is a fine grade of cotton, highly absorbent of liquid, and proportionately less so of semi-liquid excretions. The back-

ing is of an impervious parchment paper, which retains its contents and prevents soiling of the bed linen.

While many additional uses to which this absorbo-sheet may be adapted will promptly suggest themselves to the experienced surgeon or nurse, there may be mentioned obstetrical cases, enuresis of either paralytic or infantile character, suppurating sores, certain operative and post-operative conditions, and, in general, the collection of excretions of any character, with the minimum discomfort to the patient and protection of bed linen.

In certain types of obstetrical cases an excess of fluid may be readily disposed of as follows: pin a strip of 1-inch bandage across one end of sheet, leaving tails on each side of sufficient length to tie about the body. Make one fold of sheet about bandage, to prevent injury from pins. Place sheet under patient, draw corners up slightly to conform to contour of the body, and tie ends over abdomen. This prevents fluid from following the skin up the back. The free end of the sheet may now be formed into a drain by pinning each corner over toward the center, leaving a channel 6 inches wide down through the middle. The amount of fluid present in excess of absorbent capacity of sheet will follow down along the impervious paper backing until the folded corners guide it toward the center of the lower end, where it will drip off, to be caught in a suitable receptacle placed on the floor.

The size (24 by 36 inches) is large enough for practical needs without being unwieldy. The cost is so low that many prefer to use and destroy it rather than risk infection from some other device previously used on other cases and not thoroughly sterilized. Each sheet is rolled in an individual carton, both ends carefully sealed, and it is ready, therefore, for instant use in an emergency.

New Apparatus for the Determination of the Correct Specific Gravity of Urine

That the determination of specific gravity is one of the most important urinary tests has long been maintained by the more advanced and painstaking men in the medical profession. Until quite recently, however, they did not



Tycos urinometer.

have at their disposal really scientific apparatus to make tests of which they were absolutely sure as to their accuracy, but such an apparatus has been devised and put on the market under the trade name of the Tycos urinometer, which instrument was described in this journal in

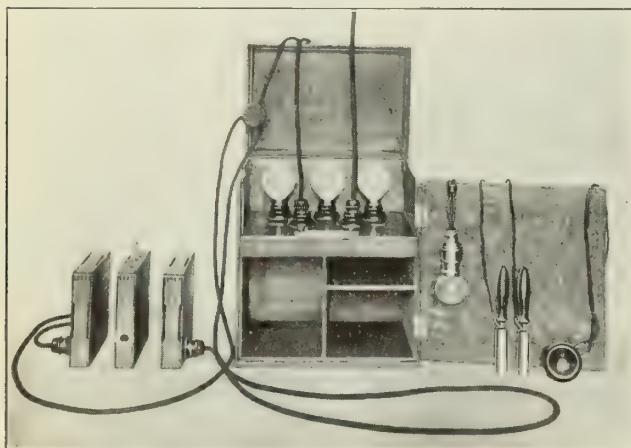
May, 1914, page 319. Recently another urinometer of similar type has been perfected by the same manufacturers which is intended for determination of specific gravity of small quantities of urine, the capacity of the jar allowing the determination of amounts as low as 25 cc. The urinometer jar is of very fine, tough, and especially clear glass, nicely finished and accurately graduated, and has a scale extending from 1,000 to 1,035 in 10-degree graduations. It is standardized for urine at a temperature of 77 degrees Fahrenheit with hand-written scale. The body of the urinometer has little glass points projecting from its surface so as to prevent the instrument from adhering to the sides of the jar. With the urinometer and the urinometer jar is furnished a correction thermometer, which, instead of registering degrees, registers the correction to be added to or subtracted from the specific gravity reading, depending on the temperature of the urine.

The method of using the instrument is as follows: Take the condensed reading in the usual way, then place the correction thermometer in the urine and note the point of the scale on a level with the indicating column. If this figure is above the point of standardization (77 degrees), the figure is added to the specific gravity reading, and, if below, the zero figure is subtracted from the specific gravity reading.

Magnetic Wave Generator

The Bachelet magnetic wave generator is an apparatus which has received much attention in the treatment of nervous conditions, and a number of them have been installed in sanatoriums with excellent results. In character the current is not a great deal unlike the Morton wave current delivered by a static machine, though the apparatus has the advantage of being considerably smaller in size compared with other devices for generating a magnetic field in which the patient is placed.

With this type of equipment the patient is placed in the



Bachelet magnetic wave generator.

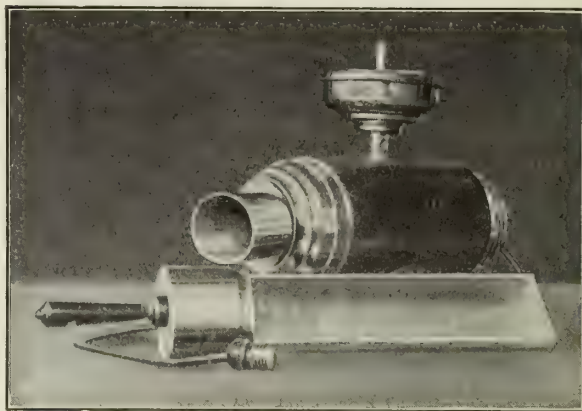
field, one of the generators in front and the other behind the patient, though some distance from him. As the generators are brought into effect, lines of force travel from one to the other, the patient's body being in the path of a considerable amount of current—namely, up to 3,600 milliamperes is passed. It is stated that there is no undue excitation of the nervous system as in many other cases of electrical treatment; on the contrary, the current absorbed acts more as a nerve sedative. Treatment of this character also has the advantage that the patient need not disrobe.

The operation of the apparatus is quite simple, and treatments can be properly carried out without a great deal of experience and with the loss of very little time. The apparatus is designed to operate from an alternating current, and can be connected to any convenient electric light socket.

Instantaneous Electric Steam Sterilizing

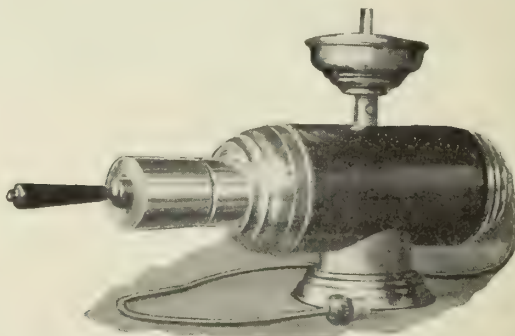
Sterilization with live steam has long been looked on by the careful surgeon as the only method whereby he may be assured that his instruments and other operating accessories are absolutely aseptic. The rather bulky and somewhat complicated apparatus, the escaping steam and other discomforts resulting from the use of such apparatus, make it practically impossible to use this method in the doctor's office or in the hospital dressing room.

A new apparatus has recently been put on the market



Instantaneous electric steam sterilizer open, showing instrument tray.

which sterilizes at atmospheric pressure by combining radiated heat with superheated steam, the steam forming a protecting film upon the instruments, so that their temper is not in any way affected by the heat. This method is known as the Pentz system of sterilization. The manufacturers claim that, where it formerly required thirty minutes' time at 15 pounds pressure, the same results may be obtained in thirty seconds by using this apparatus. The apparatus somewhat resembles a thermos bottle fixed on a standard in a horizontal position. The wires enter at one end, while the other receives a cylindrical tray which



Instantaneous electric steam sterilizer closed up ready for work.

practically fills its cavity. Above the body of the sterilizer is a cup from which water drips through a steel tube with glass windows into the heated chamber surrounding the inner cylinder into which the instrument tray is inserted. Here it is converted into steam, and as such passes through small holes in the bottom of the inner

cylinder into its cavity. The drip is regulated by a thumb-screw.

The temperature attained by the sterilizer varies, dependent on the rate at which the water is allowed to drip. With the water dripping at the rate of 40 drops per minute, a temperature of 350 degrees C. (662 F.) is obtained. This temperature is reached in ten to twelve minutes after turning on the current, and then the apparatus is ready for instantaneous sterilization.

The apparatus for use of physicians and clinics is manufactured in several sizes, having sterilizing trays 4, 5, or 6 inches wide, with respective lengths of 18, 22, and 26 inches, thus making the sterilizer suitable for accommodating practically all types of surgeons' instruments. These sterilizers have an asbestos jacket for conserving the heat, and the outside body is finished in black and white nickel plate.

Sexual Armor for Prevention of Self-Abuse by Insane Patients

DEvised BY ELLEN E. PERKINS, R. N.

It is a deplorable fact that one of the common causes of insanity, imbecility, and feeble-mindedness, especially in youth, is due to self-abuse, an evil which is about equally true of both sexes. Physicians, nurses, and attendants connected with insane asylums have found this the most difficult of all bad practices to eradicate because of the incessant attention required of them in respect to the sub-

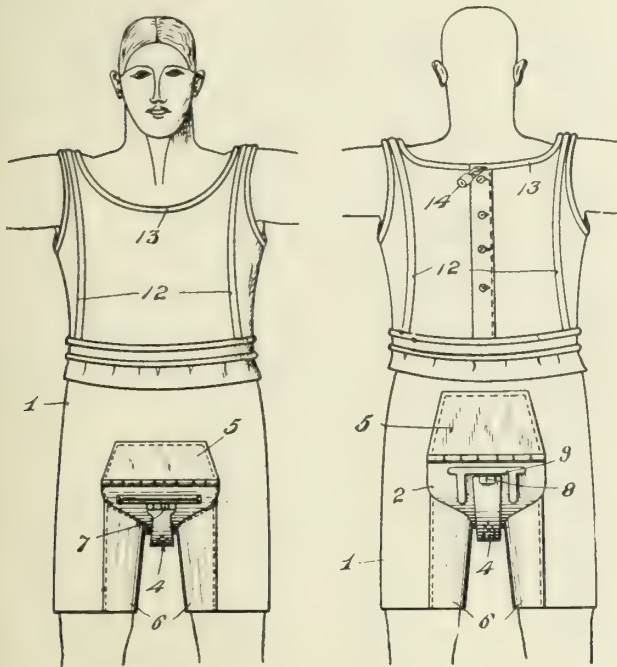


Fig. 1.

Fig. 2.

Front and rear view of Perkins' sexual armor.

jects in their care; in fact, it has been found practically impossible to give to any such unfortunate persons that constant personal attention which is necessary to accomplish their redemption from this habit. The inventor of the apparatus illustrated here, in her capacity as a trained nurse, became very familiar with this subject, and the melancholy human tragedies transpiring before her eyes have impressed on her the necessity of a device which will aid those concerned in the treatment of such cases in the cure of this disastrous practice, and will at the same time give the person under treatment the necessary personal liberty. Mrs. Perkins has invented a simple and ef-

ficient device, shown in the accompanying drawings, which she claims accomplishes the prevention mentioned above. Fig. 1 is a front view, showing the device applied to a person, and Fig. 2 is a rear view of the device shown in Fig. 1. The device consists of a cloth gown made in form much like an armless short-legged bathing suit. The metallic part of the armor is secured to the crotch portion of the garment, and comprises two principal parts—an inverted arch-shaped thin metal crotch, having a central opening or segmental slot, and a segmental gate, which normally closes said opening or slot. The crotch plate at its upturned front and rear extremities is provided with hinged extension plates, which, as well as the side edges of the arch plate, are stitched and securely attached to the trunk portion of the garment. The inner portion of the legs of the garment are covered with heavy leather reinforcements, the upper edges of which are securely attached to the sides of the arch plate. The segmental gate is provided with lock and key. The gate is perforated, so that liquid matter may be passed through with the door locked in its normal position. When at certain times and for obvious reasons it becomes necessary to open the gate, it can be unlocked by the proper person and then turned forward and upward. The shirt portion of the garment is reinforced by shoulder straps and a neck strap of leather. The ends of the neck strap at the rear of the garment are connected by a small padlock, so that it will be impossible to remove the garment without first unlocking this padlock.

In actual practice the inventor claims that the armor above described, when correctly made and fitted to a patient, may be worn with very little discomfort, and, when properly covered by overgarments, the fact of its being applied will not be noticeable.

Kuttner-Leitz Microcolorimeter

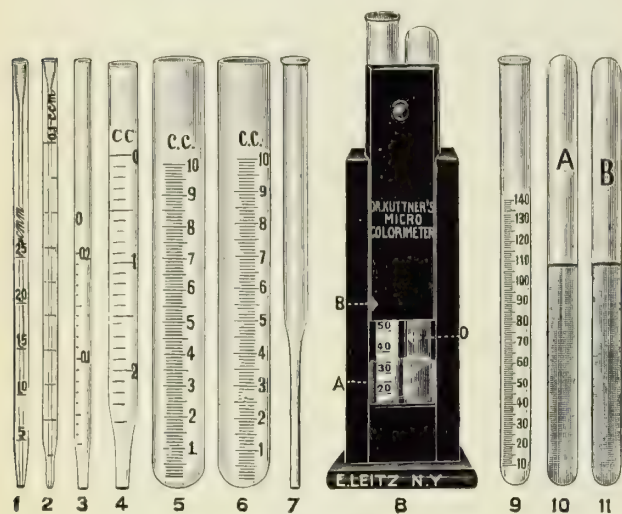
The use of colorimeters of various forms in pathological laboratory work has steadily increased during recent years, and many devices have in consequence been designed. Previous to the time when exportation from European countries ceased, most of these instruments were imported. In common with many other instances, American ingenuity came to the rescue, and a universal colorimeter is now being made here, which for simplicity and accuracy is far better than many of the more elaborate and expensive European instruments.

The device illustrated was designed by Dr. Theodore Kuttner, of New York, and is intended for the examination of blood, urine, or other physiological fluids. The same calibrated and color tube employed in the Sahli-Gower hemoglobinometer has been adopted for this instrument. Neither in their diameter nor in their calibrations are the tubes on the market uniform, thereby causing great discrepancies in determinations. By the use of certain micromeasuring apparatus this has been remedied in the Kuttner microcolorimeter by having all calibrated tubes made with the utmost uniformity, thus reducing the percentage of error to a minimum.

The Sahli allows both the calibrated and color standard tubes to be viewed at full length; the new instrument, however, shows only a small part of the tubes when making color comparisons. This facilitates the color reading and is less fatiguing to the eye. An additional feature is a prism (A), to be described, which apparently causes the contents of the tubes to approach each other more closely, thereby accomplishing greater accuracy in the comparison of colors.

The instrument, consisting of a closed upright box, 2.5 cm. by 8.5 cm., is smaller than the Sahli. At the top there are two openings—one for the color tube and the other for the calibrated tube. Near the lower front part is a window provided with the prism mentioned (A—Helmholtz double plates), which serves the purpose of having the colors of both tubes appear close together, forming one continuous color band. The prism is easily removed for cleansing and can be quickly readjusted. A sliding door (B), which can be raised and lowered, protects the prism from dust and injury. The color standard and calibrated tube are separated from each other by a partition, which prevents light from being reflected from one tube to the other.

Nearly all standards in colorimetric work are more or less unstable, being composed of organic substances, but with the standards of Dr. Kuttner's microcolorimeter this factor of inaccuracy is obviated by making use of small hermetically sealed tubes containing only mineral substances in solution, which are stable.



Kuttner-Leitz microcolorimeter.

The standard color tube is inserted into one of the openings and the sliding door raised until the window is exposed. The calibrated tube, with its contents ready to be estimated, is inserted into the other opening and the diluting fluid added drop by drop and mixed until the color matches that of the standard. When this has been accomplished, the sliding door is raised enough to enable one to observe the height which the fluid has attained. The calibrated tube is graduated up to 140. In order to obtain close results when making readings, it is best to read at that point at which the color just matches the standard, and then, slowly continuing the dilution and taking other readings, accept as the final figure the one just previous to the point at which the color became fainter. In most of the methods the reading so obtained is equivalent to that many milligrams of the substance sought in 100 cc. of the blood, urine, etc., which is being tested. In order to obtain the result expressed in percentage, it is only necessary to divide the obtained number of milligrams by 1,000, thus:

$$\frac{75 \text{ mgrms.}}{1,000} = 0.075 \text{ percent}$$

The instrument should be held at a distance convenient to the eyes of the observer.

QUERIES AND ANSWERS

Fumigation Up Again

To the Editor of THE MODERN HOSPITAL:

May I ask your advice as to the best manner of fumigating hospital rooms? We have found no method that was entirely satisfactory. A FAR WEST HOSPITAL.

We have realized for some years that fumigation, as it was actually practiced, and as it is possible to practice it in the rooms and wards of a hospital, is worthless. A good deal of laboratory and clinical work has been done to establish this fact. About a year ago the New York Department of Health gave up fumigation. The United States Public Health Service fumigates only under exceptional circumstances and where it is able to control the gases, such as aboard ship, and even then cyanide and sulphur are the gases of choice, neither of which is practicable in a hospital, and are used more to destroy insects and vermin than microorganisms.

Richardson, of Providence, cleans his rooms, following a case, with soap and water, sends the mattress, pillows, and rugs to the disinfector, and washes the blankets and bed linen after soaking them in a 3-percent carbolic solution.

Size of the Administrative Staff

To the Editor of THE MODERN HOSPITAL:

The question frequently arises here as to the number of staff we employ in proportion to the number of patients, or beds. As I understand the matter, the proportion depends entirely on the kind of institution. A hospital that is complete in itself—that is, has its own laundry, power plant, pathological department, etc.—will, of course, show a larger staff than the hospital which pays to have the work represented by these departments done outside the institution.

I would like to ask you if, in estimating the ratio between the number of your staff and the number of your patients, you would include the probationer nurses—that is, the nurses who have not yet completed their three months' probation, and are really not members of the training school.

I have always understood that this ratio of one to one is about correct, and on looking back I see I have maintained about that proportion (usually less). However, the ordinary laymen of the board of directors always think that this figure is far too high, and that the staff is too large.

I would be very much pleased, indeed, to have your advice on this matter, and, if possible, I would like to have your reply before the next board meeting.

A CANADIAN HOSPITAL.

Some of the best hospital men in the country predicate their evaluation of the services given to its sick people by a hospital on the proportionate size of the staff of well persons employed. A hospital cannot give service that is undermanned, and it is pretty nearly unanimously agreed that for a hospital of 180 patients, or even for a hospital of anything more than 100, the proportion of well people to sick is about equal; but these well people would include all the administrative staff—that is, resident officers, heads

of departments, the common help, and nurses in training, including probationer nurses; the latter because these young women, although they are not in uniform, would perform certain services simple in character perhaps, but services that leave free the older pupil nurses to perform a higher order of service in connection with the care of the sick.

It must not be forgotten that a certain number of the executive staff, including pupil nurses, are required for night duty, and that there are twenty-four hours in each day, and that the people employed cannot be expected to work twenty-four-hour shifts, so that in some departments there is a duplication of well people. Too many hospitals are ignoring this fact in figuring the number of well people required.

The time has gone by when we can regard our modern hospitals as mere boarding houses for the sick, and sick people are sick twenty-four hours in the day, and in an acute-disease hospital they require service during all the twenty-four hours—not as much service in the night as in the day time, because there are no dressings to do, no surgery, except in emergency, and not much feeding of patients. But nurses must be present at night to answer calls, see that orders are carried out, medicine given, and the necessary nourishment provided for those for whom the doctors order it. There are also temperatures to take and the charts to keep up, there are patients to be admitted, maternity cases to care for, and hundreds of other definite and needed services to be rendered. A good many trustees forget these things, and they seem to think that, if the hospital is properly manned during the daytime, everybody can go to sleep at night and wake up to find things ready for routine running in the morning. This is not true in a properly operated hospital.

The Hospital Organization

To the Editor of THE MODERN HOSPITAL:

We are at the present time at work on plans for a new hospital for our university, and in this connection I am giving considerable thought to devising a modern and logical scheme of organization, one which shall properly take care of the problems of delegating authority and satisfactorily separating departments.

In looking over our files of THE MODERN HOSPITAL, I note in the September, 1914, issue an article on Hospital Organization and Accounting by H. M. Wechsler, which is interesting, and which is fully in line with our practice. This is a surgical hospital of 100 beds. What I particularly wish to know is, to whom is the head surgical nurse properly responsible? Should she be responsible to the superintendent or to the superintendent of nurses, who, in our hospital, in addition to her authority as dean of nurses, is responsible to the superintendent for the nursing service. She has responsible to her the following assistants: assistant superintendent, head nurses, special nurses, orderlies, ward nurses, graduate nurses, training school faculty, and housekeeper of nurses' home.

In our organization the operating rooms service is a separate department, and is in charge of the head surgical nurse, who is responsible for its conduct to the general superintendent. I would be grateful to you for information as to the practice of some of the best and most modern hospitals in this regard. I trust that I am not imposing unduly on you in asking for this information.

With assurance of my appreciation for any information you may find it convenient to give me along this line, I am, etc.,

DEAN.

It seems the clearest proposition imaginable that in the organization of your hospital there must be one final authority—viz., the superintendent. It does not matter to whom the superintendent is responsible, whether it be a board of trustees or the faculty of the medical school, or even the medical staff of the hospital, the superintendent

must be responsible for, and have authority over, everything concerned in the management of the institution.

But, in thinking about the active control of the surgical nurse, it is usual to have the surgical nurse—in fact, all the nurses—directly answerable to the superintendent of the training school, while the superintendent of the training school, in her turn, is answerable to the superintendent of the hospital, in the same way that the cook in the kitchen is answerable to the housekeeper and the housekeeper is answerable to the superintendent of the hospital. The superintendent of the hospital would not think of giving orders to a stoker in the power plant, but he would give his orders to the engineer, who would be directly over the stoker. Unless you have some central authority, who can be looked to for all executive orders and executive action, you cannot have a responsibly conducted institution.

You say that in your hospital the superintendent of nurses has under her jurisdiction the assistant superintendent, the head nurses, special nurses, orderlies, ward nurses, graduate nurses, training school faculty, and the housekeeper in the nurses' home. This is just exactly as it should be, but the superintendent of nurses herself should be answerable to the superintendent of the hospital.

It would be one of the most disrupting and disorganizing things imaginable to have the surgical nurse reporting over the head of the superintendent of the training school directly to the superintendent of the hospital, and this is not done in any good hospital of which we know. Let us reason it out briefly: the workers in the operating rooms are pupil nurses, and they are supposed to get their training under the superintendent of the training school. How are they to be controlled in their curriculum and in their regular studies, and in the regular work itself, as a part of the training school, if, the moment they go into the operating room and under the direct supervision of the head surgical nurse, the superintendent of the training school ceases to have anything to say about them or concerning their training? And, yet, you are holding the superintendent of the training school responsible for the training of these young women.

We think that the best judgment of the strongest hospital administrators in the country is in favor of departmental separation and responsibility, with as much independence of action for the several heads of departments as can be created, always presupposing that there must be team-work between the departments where their activities overlap, and we believe that the best hospital superintendent is the man or woman capable of accepting responsibility for all these departments and of getting cooperation and team-work from all of them.

When it comes to the question of the central authority, it seems to us there is no argument about where it should lie; if the work in the operating rooms is not up to the best standards in technic and execution, and if thereby physicians should leave the hospital and take their patients elsewhere because they were unwilling to submit their patients to the faulty operations of the surgical department, and if, in consequence, the hospital lost the patronage of some valuable medical men and suffered in its financial department, do you think the surgical nurse would be called on by the board of trustees for an explanation? It seems to us the superintendent of the hospital would mighty soon hear from the board and be asked for an explanation of the falling off in the income, or for an explanation concerning the loss of the patronage of some of the strong medical men who had been sending their patients there.

It will be noted always that when there is any trouble in the hospital, of whatever nature, the person held to account is the superintendent of the institution. If a patient in a delirium jumps out of a window and is killed, is it the head nurse of the floor that is held accountable or the superintendent of the hospital? Our experience is that the coroner sends for the superintendent of the institution and is likely to give him a pretty troublesome half hour, and the head nurse on the floor never hears about it. If the floor supplies are wasted and the bills climb up, the housekeeper is not called before the board of trustees, but it is the superintendent again who must answer. In all of these cases the superintendent of the hospital can go back to his department heads and hold them responsible, but in a final analysis he must bear the burden himself, and himself alone, for whatever mistakes or accidents or misfortunes occur under the roof of the institution, no matter in what department.

How to Treat Bed Sores

To the Editor of THE MODERN HOSPITAL:

Please let me know if anything has recently been published on the subject of the treatment and prevention of bed sores. I should like very much to have the latest information on this subject which is available.

A TORONTO HOSPITAL.

The answer to this inquiry is given by Dr. Joseph C. Friedman, internist on the staff of Michael Reese Hospital, Chicago.

The best way of preventing bed sores is to keep the patient scrupulously clean and especially dry, as well as by different changes of position. At the first appearance of a suspicious red spot, the mattress should be changed for a water-bed and a pillow be placed just outside the red area, so as to keep it from all contact with the bed. Alcohol is used after careful washing of the parts. If a sore develops, an application of equal parts of balsam of Peru and castor oil should be used; then a dry dressing applied to this. The application is made at least three times in the twenty-four hours, the pillow still being used to elevate the sore slightly. At each change of dressing it should be cleaned with peroxide. In case of extremely indolent sores a pad of 2 to 8 percent scarlet red in lard may be used to stimulate epithelial growth, and, if the case has been an extremely neglected one, the application of the ultra violet ray is worthy of trial.

Wants Isolation in Small Hospital

To the Editor of THE MODERN HOSPITAL:

In your judgment, could a hospital undertake the treatment of contagious diseases in a building to be added for that purpose or in a separate building?

We may enlarge our present hospital building. The question has arisen whether we could in any way provide for the treatment of contagious diseases. Some have thought that an addition, either separate or in connection with the building, might be constructed so that it could be used in the general work of the hospital, and, should the necessity arise, also used for the treatment of patients with contagious diseases.

We would appreciate any information which you would give as to how a hospital in a not large city might be equipped so as to treat contagious diseases. A. B. P.

The only real demand in an isolation department is that it shall have facilities to cut off intercourse with the rest of the house. A door that can be locked is quite an efficient separation, and the department itself should have at least four units or rooms in which the chief infections can be isolated. An ideal arrangement would be four rooms,

each containing a small alcove or separate room in which a gas plate, running water, toilet, and bath can be installed. Each of these units should open to the outside, so that an orderly can deliver food, necessary medicines, clean linens, etc., and take away the soiled linens, soiled dishes, and so on. The method of handling these various items is a technic in itself. The dishes, after being used in infected quarters, would be immersed in a 3-percent carbolic solution and delivered to the orderly by setting them on the porch; soiled clothing would be delivered in the same way, or placed in a regular laundry bag, the latter not having been in the room, but left on the outside for the purpose by the orderly, who returns to get the filled bag.

It will rarely happen that you will have more than one or two infections at a time, and the other rooms of this suite—which, by the way, would have their doors opening on the inside corridor—could be used for any other purpose or for any other class of patients; that means that another very particular, but easy, technic must be applied in the cleaning of the rooms after a case is released. We are not using fumigants very much at present, and under ordinary hospital conditions they are not efficient, and we do better now by sending the mattress to the sterilizer or by soaking it in a 3-percent carbolic solution for twenty-four hours, and by employing the same method with blankets and pillows. The blankets should not be sent to the sterilizer, however, as it destroys the fabric. The room itself is cleaned with a 3-percent carbolic solution, using tepid water and soap; the beds, furniture, floors, walls, and ceilings are washed in this way. If it is properly done, you will be perfectly safe in putting in any kind of a case that you have.

Selection of Training School Pupils

To the Editor of THE MODERN HOSPITAL:

At your earliest convenience, will you kindly answer the following questions?

1. What do you consider the best method of selecting from applicants—that is, ways of determining suitability as regards character, etc.?

2. What method of procuring references do you advise and to what extent do you rely on these?

3. What amount of preliminary education is compulsory? Would you insist on high school graduates or would you make exceptions?

4. What is the best minimum age limit?

A PERPLEXED PRINCIPAL.

Please let us answer your queries in the order in which you have asked them:

1. There is no infallible index as an insight into character; personally, I would rather spend five minutes with an applicant, and look her in the face and talk to her, than to have all the references that could be accumulated. Certain letters that she may bring with her will help, of course.

2. Most of the training schools prefer letters from the clergyman with whom the applicant's family has been on intimate terms. Personally, I care nothing whatever about letters from clergymen. In my experience they are utterly worthless; more worthless, if possible, than letters from a relative would be, because any young woman can get letters of the very highest commendation from a clergyman in her home town. The best letters that I know about are letters from medical men in the community from which the applicant comes, but they are not letters from the family physician or from a medical friend of the family. I very much prefer to write letters of inquiry, and I like to write them to medical men of standing in the community, and I am not particular about whether I

know the medical men or not; I want to know only the position they occupy in the community, and the right sort of personal letter to them will get the right sort of confidential reply.

3. I am not in accord with the prevailing rule in regard to preliminary education. I think the applicant who has had a good common school education, supplemented or preceded, or both, by good home training, will make the best nurse, and I prefer her; the other alternative being an educated girl without the home training and without the sound morals. In other words, if I must make a choice between the two, I take the conscientious girl with the home training and the common school education. My sort of girl is not the one who will make the best teacher, and I would not try to make a teacher of that kind. I would rather, of course, have the college-bred woman, because she, too, can be of high moral character and good home training, but there are not enough good young women with college education to fill our training schools.

4. I know young women of 17 and 18 who are more mature, and who are capable of making better nurses and even better pupils, than some other women who are far older. Girls generally finish their school work when they are 17 or 18, unless they are going to college, and, if they are compelled then to wait for three or four years until they are 22, they will have lost the habit of application, and it is my experience that they do not keep up well in their book work. The girl who has had the right sort of bringing up, can, as the saying is, "stand without hitching" just as well at 18 as she can at 21. Nor do I think we have established just the correct maximum age limit—that is, if it is to be arbitrarily enforced—because I know nurses who graduated at 40 and who are making splendid nurses, so I think it is the individual rather than the mass that should rule in the matter of age limit.

5. I think the best pupils in most training schools are women recommended and sent in by members of the medical staff of the institution. These men know the hospital and they know the girls, and I think they are better qualified to judge as to the fitness of one for the place than anyone else; besides that, these medical men are usually personally concerned about the welfare of local young women whom they recommend, and I think take more interest in their work and lives than they do with women who go in as strangers to them.

JOHN ALLAN HORNSBY.

Cost and Limits of Welfare Work

To the Editor of THE MODERN HOSPITAL:

I would be glad to be advised what studies you may have made into the subject of hospital requirements for the attendance of employees in industrial corporations, and the cost of construction and equipping this type of establishments of various sizes.

In connection with our own welfare plans I have had occasion to look into the hospital question, and am collecting such information as is available on the subject.

A MUNICIPAL TRACTION COMPANY.

There are no figures of cost that may be used as standards in industrial welfare work; indeed, the work itself is not standardized, and there is no unanimity of opinion as to just what work should be done. Some corporations have a small hospital in the factory plant, with two or three beds for emergency, a small operating and dressing room, and an auxiliary room or two for supplies, sterilizers, etc. Some of them have no hospital beds in the plant, but merely a surgical dressing room and a dispensary and examination room. Some of them do nothing of

hospital or dispensary work in the plants, but have a nurse or social secretary who looks after the health of the employees, and visits such of them as are sick, in the homes. Many of them conduct cafeteria lunches for their employees, and a few of them have developed this luncheon plan by the aid of expert dietitians, and have made a great point of it. Some corporations, especially those whose plants are in small towns, have athletic and social clubs, and spend a lot of money and time in preparing entertainment for the people; this is one way of keeping industrial workers contented in small communities.

It seems to us there is opening up a field for an industrial engineer in this welfare work, someone who can go into a plant, study the needs of that particular institution, and prescribe forms of welfare service that will meet the special need. Such a survey is becoming more necessary as time goes on, and an expert who has given a lot of study to it in many plants would be able to devise a welfare service that would give the corporation the needful things without any fads or fancies. In your own case you will have to make some such survey as this, because it is almost impossible to make any hard and fast rule as to what a corporation shall do. For instance, there may be an excellent general hospital nearby that has a good out-patient and dispensary department, and where arrangements might be made by the corporation with the hospital for the dispensary and out-patient care of the employees, which would be a great help; the corporation would pay a certain sum to the hospital and look after the hurts and illnesses of its employees.

But quite easily it might happen that conditions were reversed, as, for instance, at Rahway, N. J. There was no hospital there, and the nearest hospital was at Elizabeth, some twenty miles away. The Wheatena Company, with its plant at Rahway, built a small hospital into its new factory building, and invited the doctors and the public at Rahway to use the hospital. There the corporation created a hospital for the surrounding community.

Miss Lemoyne Phares, superintendent of the Inge-Bondurant Sanitarium at Mobile, Ala., was elected president of the Alabama State Association of Graduate Nurses at the annual meeting of the association held in Mobile the first week in October. The other officers for the ensuing year are: Miss J. Cady, Mobile, first vice-president; Miss Bell Hope, Montgomery, second vice-president; Miss Helen McLean, Birmingham, recording secretary; Miss DeWitt Dillard, corresponding secretary; Miss Mary Denham, Birmingham, treasurer.

The Denver (Colo.) City and County Hospital has recently completed extensive improvements, including the laying of new floors, the erection of a new operating room, and twenty rooms for nurses, the installation of a new x-ray machine, the building of a maternity room, the purchase of a new ambulance, remodeling of garage, and the installation of new fire escapes. Ramps have been substituted for stairways, and it is asserted that the big building, housing an average of between 340 and 400 patients, can be emptied in three minutes without removing a patient from a bed or cot.

The city of St. Louis has recently opened the first two units of a new isolation hospital designed ultimately to comprise a group of five buildings besides nurses' cottages, and to cost about \$500,000. The structures now in use have a capacity of 250 beds, and are built in accordance with the newest approved ideas for hospitals of this class. Features of the construction are plate-glass partitions and arrangements for the maximum of sunlight. Pay patients will be received, and this policy is expected to benefit not only residents of St. Louis, but also strangers who may be stricken while in the city.

The Value, Scope, and Expense of Routine Dental Treatment in Hospitals

BY THOMAS B. HARTZELL, D. M. D., M. D.,

Research Professor of Mouth Infections, Medical School, and Professor of Oral Surgery and Clinical Pathology, College of Dentistry, University of Minnesota; Director of Special Research for the Research Institute of the National Dental Association.

It is the earnest ambition of the author of this paper to so marshal and present the facts at his command that those interested in the management of hospitals will feel impelled to adopt measures that will secure the benefits of dental treatment to the patients of all hospitals. To bring this about, I must present valid reasons which will impress the minds of business men, because hospital superintendents are, first of all, business men, and, second, physicians. Therefore, I will plunge at once into a consideration of the reasons for dental and mouth sanitation.

The flora of the human mouth is varied, and contains at one time or another almost all the pathogenic bacteria that have ever been recognized. The human mouth is the greatest gateway to infection of the body. Nearly one-half of all the bacteria in the human mouth belong to the type known as streptococci, and the tooth's surface is the habitat from which most of the streptococci in the mouth procreate and spread to the balance of the body. By actual weight and count, Kligler¹ has shown that human tooth scrapings from healthy mouths contain from 6,000,000 to 8,000,000 bacteria to the milligram, and in diseased mouths from 600,000,000 to 800,000,000 bacteria to the milligram. He has shown by weight and count that 44 percent of this enormous mass of bacteria is streptococci,

ected by epithelium, making possible the entrance of bacteria in this area into the surrounding veins and lymphatics.

The total length of the gingival margin in the mouth of an average individual is 30 linear inches. Into this crevice may drift the bacteria growing on 20 to 30 square inches of tooth surface. If continued growth is undisturbed, the toxins and ferments of the streptococcus and staphylococcus soon injure the epithelium lining the crevice. This results in decomposition of the epithelium and pus formation, and the subsequent entry into the circulation of the bacteria growing in there. The broken-down tooth with its open pulp canal or the badly filled devitalized tooth becomes the direct avenue of inoculation. These two avenues may, therefore, be the means of conveying into the circulation great numbers of bacteria, so scattering them into the blood stream that immunity is broken down, and local



Fig. 1. Mrs. B., a bed-ridden hospital case of arthritis deformans. Had tonsils removed two years prior to entrance in hospital. Case presented a focus of infection in her jaws.

and from 18 to 22 percent is staphylococci. The balance of the flora of the mouth contains many other organisms, notably the pneumococcus, the fusiform bacillus, various families of spirochete, and molds. It is a known fact that the streptococcus has an enormous rate of growth, under favorable conditions doubling in number every thirty minutes. The greatest growth in the mouth occurs between the teeth, at their necks, and on the sides of the teeth that are not disturbed by the movement of food in mastication. It is also a recognized fact that broken or decayed teeth with open pulp chambers form an avenue through which many of these bacteria enter the circulation.

It is an easily demonstrable fact that the gum margins receive and contain at all times great numbers of these bacteria, and an examination under the microscope of a section of human gum margin, involving the crevice and subgingival space, shows that it is very meagerly pro-



Fig. 2. This picture shows the patient standing up on the day she was discharged from the hospital. She regained the ability to walk and was discharged from the hospital as a result of the removal of infected teeth and subsequent vaccination by the streptococci obtained from the dental lesions.

ulcers at the gum margin become the origin of secondary lesions—heart, joint, brain, liver, lymph nodes, and intestinal mucous membrane.

The series of pictures of secondary lesions produced experimentally by the inoculation of animals with human salivary streptococci is offered here in support of the statement that 75 percent of all heart disease, both myocardial and endocardial, is dependent on streptococcus viridans, and that many of the lesions of ordinary arthritis are due to the same cause.

It is the belief of the writer, supported by clinical experience and experimental lesions produced in animals, that a great percentage of kidney disease is also due to the same common mouth infection. Attention is further drawn to the fact that this enormous production of streptococci and staphylococci growing upon the tooth surface, together with other putrefactive microorganisms, is swept

¹Journal of the Allied Societies, September, 1915.

into the stomach by the acts of mastication and ingestion of food, interfering with digestion and modifying nutrition. We have shown, by the inoculation of a series of 225 animals with fifty strains of hemolytic streptococci in part and mouth streptococci in part, that ordinary salivary streptococci, when introduced into the circulation in any considerable amount, produce within a very few percent as many heart, kidney, joint, intestinal, and brain lesions as does the most virulent hemolytic streptococcus. A table submitted of a recent research by Henrici¹, undertaken for the National Dental Association, substantiates this fact; therefore the elimination of mouth streptococci by certain simple but vigorous methods of mouth sanitation will greatly reduce the types of disease dependent on this kind of infection. The records of focal infection secondary to mouth infection, including teeth and tonsils, in the Minnesota University Hospital, show that from 30 to 50 percent of admissions in the medical service are *there* as a result of preventable secondary infection dependent on mouth infection. We have found by actual treatment that 10 to 20 percent of the beds in the medical service can



Fig. 3. An ordinary hospital case.

be emptied by adequate dental service, and that most of such cases could be prevented if the American people would universally practice vigorous mouth sanitation.

SCOPE

The experience gained in the past three years, in the maintenance of a clinic for experimental purposes in the University Medical School Hospital for the Research Institute of the National Dental Association, has taught us that oral prophylaxis is of such great value that the service will be amplified during the coming year. I might explain that with us oral prophylaxis means the vigorous scrubbing of all tooth surfaces so they shine like polished porcelain, and the heavy rubbing of the gum margins with dry cotton. Of so great importance do we deem this that we are increasing this service in the hospital by assigning a special nurse to this work, whose duty it will be to go from bedside to bedside inspecting the mouths of patients, and thus making sure that sufficient time and effort have been given to this work, as it requires not less than fifteen minutes a day per patient.

All patients entering the hospital should have their mouths and teeth inspected as part of the routine examination, and the early cleansing of the mouth should be observed with the same care as the initial bath and clean

clothing. In those cases in which the patient is exceedingly ill the swabbing of the mouth with a sponge of cotton the size of an English walnut dipped in hydrogen dioxide should be the first step. This swab should be vigorously handled, reaching all parts of the whole mouth, including the tongue, and should be followed by a light scraping of the tongue and a rinse of warm water. Where gingivitis exists, and the patient is not too ill to preclude careful work upon the teeth themselves, the teeth should be cleansed of all scales of tartar and bacterial masses. They should then be polished to make future cleansing easy. After this service has been rendered, the gums should be touched with a mild iodine solution. We have observed that the above line of treatment shortens the residence in the hospital of all types of patients. In the foregoing sentences I have outlined the simplest form of hospital treatment that could be adopted, and have not attempted in any way to outline the scope of what should be done for individuals suffering secondary infection as a result of mouth infection.

I will now briefly outline methods for the treatment of secondary diseases arising from mouth infection, whether it be heart, joint, or kidney. Such cases of secondary infection should have the benefit of early x-ray examination, and the primary focus accurately determined by combined macroscopic and x-ray examination. If the gums are found to be suffering mild gingivitis only, then the treatment of gingivitis should be undertaken immediately. In case there is much bleeding, an interval of three or four days should be allowed to intervene between each treatment. If the case is one of an active prolific pyorrhea, in which there is still ample bony foundation to carry the teeth, preliminary prophylaxis should, of course, be followed and the pyorrhea pockets about the teeth treated by the following method: the diseased material on the root surface should be gently removed by sharp planes, so that the root surface is left a brilliant, gleaming white. Only one or two teeth should be treated at any one time, and from five to seven days should elapse between treatments, dependent on whether the patient gives evidence of acute bacterial infection as a result of treatment. To more fully explain what I mean, I will say that it frequently happens, where too many pyorrhea pockets have been disturbed at one time, there will be malaise following such treatment, a light rise in temperature, and, if the case be one of chronic arthritis, all of the joints and periarticular tissues will be made exceedingly sore and tender as a result of overinoculation of the bacteria in the pockets. This inoculation cannot be avoided as a result of the manipulation of the instruments necessary to free the root's surface of its dead infected coating. If it happens to be a case of myocarditis, overinoculation by the treatment of too many pyorrhea pockets will result in malaise and increased weakness for a period of several days. If it be a case of acute diffused nephritis, overtreatment results in an increased number of casts and more albumin than before treatment was attempted. Because of the damage wrought by overtreatment, I wish to emphasize the necessity of slow and guarded treatment of gum marginal infections. I also wish to draw attention to what has proved in our hands the most valuable fact we have learned in the treatment of secondary infections dependent on mouth infection—namely, that the reduction of the mass of bacteria entering the circulation has a distinct value when it is accompanied at the time by the necessary inoculation of the patient with the germs in the lesion, provided this inoculation or vaccination is not so great as to cause undue exacerbation of the secondary infection.

¹Article soon to appear in the Journal of Infectious Diseases.

I have many times seen arthritic cases which had failed to respond to any form of therapeutic treatment begin to improve from the very day the amount of bacteria entering the circulation was lessened by the method indicated, and I believe the benefit which these cases experience is due to two things: first, the lessening of the amount; second, the vaccinating of the patient in the act of treatment.

I wish to give a single case record, which is typical of a great many at my command, illustrating the principles just discussed.

January 18, 1916. Mr. J. J. Age, 43; white, married; a mechanic by trade. Had not lost a single day's work in three years. Experienced distress with his teeth. He appealed for dental service. Operator in charge examined the mouth and found a loose bridge resting upon two abscessed teeth, which also exhibited a copious pyorrhea. The bridge, with the two abscessed teeth, was removed, together with three other loose teeth. That night the patient experienced a chill, followed by fever, which steadily increased. All the joints of his body became rapidly involved, one after another. He experienced a typical inflammatory rheumatic attack. Was given the usual treatment by his physician. Eventually the acute stage passed, leaving the patient with feet drawn up almost to the buttocks, one wrist exhibiting an almost silver fork deformity, with the hands crossed upon his breast about the level of the sternum. When seen by the writer about the middle of May, the patient had been in bed continuously since January 18, and for the previous six weeks had made no progress toward repair. He was unable to lift the hands to his face or extend his legs. On examination it was found that he had several other abscessed teeth, together with considerable pyorrhea of the remaining vital teeth. In view of the joint fixation and atrophy, the case seemed hopeless. Directions were given, however, that the diseased teeth in the mouth should be removed and the sockets curetted one at a time, and that a period of seven days should elapse between each extraction and curettement, and that, if the patient experienced much exacerbation of the joint symptoms, the time should be lengthened to nine days between the operations. If he did not experience exacerbation, the time of interference might be shortened to five days. These directions were carried out, and, following the removal of the first abscessed tooth and the curettement of its socket, a sharp reaction was followed by a definite improvement in the general condition of the case. The diseased areas in the mouth were gradually and cautiously eliminated, and I insisted that the men in charge of the case should husband the dental lesions as they would a valuable remedy, as the ultimate recovery of the case depended entirely on the manner in which they carried out this treatment. The result has been that this patient is now out of bed, is beginning to walk, is quite able to wheel himself about in a wheel chair, and can feed himself. No therapeutic treatment has been administered since the beginning of the surgical treatment of his mouth lesions.

The lesson taught by this case and many others like it is that, when a patient is almost saturated with the micro-organisms and toxins arising from multiple lesions in the mouth, judgment and care should be exhibited in disturbing local primary lesions. It is quite evident that this patient was overwhelmed by the first operative interference on January 18, which resulted in the involvement of his whole body, and, luckily for him, enough of the primary lesions remained in the mouth to make it possible, by their slow elimination and the cautious inoculation of the low-grade living organisms found in these primary lesions, to bring about cure. We have, therefore, by these principles

the means to empty our hospital beds of many hitherto hopeless chronic cases.

I hope that I have shown that the scope of dental service in the hospital may be made to reach all that great class of invalids who suffer secondary infection from primary lesions about the teeth, as well as those suffering from only mouth infection. It really places in the hands of the internist specific methods by which he can reach a class of cases hitherto treated only by stimulation and supportive treatment. This work in our hands has included the treatment of iritis, myocariditis, endocarditis, gastric ulcer, chorea, acute nephritis, and the arthritides; in other words, those diseases dependent on the distribution of streptococcus viridans in the blood stream.

Now as to the cost of this work; that will depend on the size of the hospital and the number of patients involved, and I would advise that all hospitals employ at least one whole-time dental intern, as the work is necessarily tedious. The University of Minnesota is now graduating groups of men who pay special attention to this field of work, and it seems to me that an expense of \$100 or \$150 a month should secure newly graduated men who desire to obtain hospital experience. The work done by such a man is of the most exhausting character, and the amount that could be done in even a small hospital would be limited only by his endurance. Every dental intern should have the support of at least one trained nurse, who would assist him at all operations, prepare patients, care for the instruments, and keep records. In no case should patients be received or discharged, where dental service has been thought advisable and undertaken, without the O. K. of the dental intern.

Every hospital should have a room for this work, preferably illuminated by north light. This room should contain one complete dental outfit, including a switch-board, cautery, forceps, curettes, pyorrhea instruments, and flowing water. This outfit would be used for patients who are able to get out of bed. The room, however, should be large enough so that bed patients may be transported into it in their own beds, and there receive such necessary mouth treatment as they need and be wheeled back into their own rooms. We have found it exceedingly unwise and difficult to try to do special work in the mouths of patients in the wards. Our own equipment for this work has cost about \$2,000, and my first assistant, who is directly responsible for the work in the hospital, is paid \$100 a month.

PLAN WORK FOR CHILD WELFARE

Representatives of National Organizations Meet in Chicago to Create a General Program

At the call of the Council on Health and Public Instruction of the American Medical Association, a conference of child welfare was held at the association headquarters on Wednesday afternoon, October 18. The following organizations were represented: United States Public Health Service—Dr. W. H. Frost; Children's Bureau—Miss Julia Lathrop and Dr. Grace L. Meigs; Association for the Study and Prevention of Infant Mortality—Miss Harriet L. Leete, Mr. Albert Cross, Dr. S. H. Hamill, Dr. Philip Van Ingen, and Miss Gertrude B. Knipp; American Public Health Association—Dr. W. A. Evans and Dr. Lyman A. Jones; Conference of State and Provincial Boards of Health—Dr. J. N. Hurty (not present); Elizabeth McCormick Memorial Fund—Mrs. Dunlap Smith and Mr. Sherman C. Kingsley; General Federation of Women's Clubs—Mrs. F. D. Everett;

American Hospital Association—Dr. John A. Hornsby; Council on Health and Public Instruction of the American Medical Association—Dr. Frank Billings, Dr. H. M. Bracken, Dr. Lenna L. Meanes, Dr. Frederick R. Green, and Dr. Velura E. Powell.

The conference was called to discuss the work being done for child welfare, the possibility of outlining a common program in which all organizations and individuals interested could participate, and for the coordination of the organizations represented in carrying out such a program.

Dr. Frederick R. Green, secretary of the council, proposed the problem. He said that, while a good deal of child welfare work was being done, and in some cases very efficiently, the various organizations were not coordinating their activities and that they seemed to be overlapping, and consequently there was a good deal of wasted energy and wasted material and wasted funds. He thought it might be possible to so coordinate the work at present being done by various independent bodies, national and local, that it would result in greater efficiency, and perhaps even a program could be arranged that would pretty nearly cover the work for the betterment of child life. Dr. Frank Billings, chairman of the council, and Dr. H. M. Bracken spoke of the anxiety on the part of the council to bring some sort of order out of what seemed to be chaotic conditions, and Dr. Green stated that he thought the meeting might well open with a discussion of three or four questions, of which the following is one: Are there any factors that are of fundamental importance in the development of a program for child welfare, and, if so, what are they?

Mr. Albert Cross, of the Association for the Study and Prevention of Infant Mortality, suggested that he thought the subject ought to be analyzed and treated under six heads, as follows: (1) health, (2) education, (3) religion, (4) recreation, (5) sport, and (6) protection. He thought that by such an analysis as this, various organizations could be asked to take up the various phases and give them more adequate attention than if each organization was attempting to cover the whole general subject.

Dr. Hornsby, representing the American Hospital Association, said he thought Mr. Cross' divisions were at variance with the general scheme of organization of most child welfare societies, and that it would not only be simpler, but far easier, if even a more fundamental division were made; as, for instance, he thought the first thing to do was to find out how many children are born in this country, and that this subject alone would bring up the story of birth registration, and that work ought to be done in that field; that many states are now without adequate laws to provide for birth registration, and that in many states very efficient laws were not being enforced. He thought the next thing to be done was to ascertain the figures as to child mortality. Of course, those who died were effectively disposed of so far as child welfare work was concerned. Then the next problem was to study those who survived, and this study ought to be continued under three heads: (1) their physical well-being, (2) their mental state—that is, the number of defectives—and (3) their moral state, which would include child environment, and would go into correctional avenues as well as along many other lines. Then Dr. Hornsby thought that, after this part of the work was done, some sort of data should be secured concerning the present agencies at work in this field, the limitations of each, and he thought that by a survey in these directions some data might be secured on the overlapping by different organizations, and thus could be worked out an effective, comprehensive program on which such an agency as the present meeting promised could proceed either in an ad-

visory capacity or by initiating definite action, nationally or locally.

Mr. Sherman Kingsley, of the Elizabeth McCormick Memorial Fund, thought that the children's bureau at Washington had accumulated an immense fund of very valuable information on several topics that would necessarily be included under child welfare, and Mr. Kingsley spoke of a bulletin, which his organization is at present getting out, to be sent to various child welfare agencies, and which would schedule nearly all subjects and the detailed factors in the study and execution of child welfare work. Mr. Kingsley confined his remarks largely to the city child and the agencies at work for his welfare, whereupon Miss Julia Lathrop, of the children's bureau of the Government, said that three-fifths of the necessary work must be done in the rural districts, country towns, and on the farms, and that this phase of the work must be emphasized in whatever was done, and it was her belief that no child welfare work could be comprehensively gone into unless the work was predicated on the care of mothers—that is, prenatal care. She expressed a good deal of feeling over the fact that, as Dr. Hornsby had said, no reliable data were at hand as to births and infant mortality.

Most of those at the meeting spoke on the subject along the above general lines. Dr. Frost, for the public health service of the Government, in the absence of Dr. Kerr, said that, while he had not been directly concerned with the child welfare work of the service, he thought that undoubtedly the service would want to be of use and to help in any way that the organization thought desirable. He said that no particular study of child welfare was now going on in the service.

After a conference lasting from 2:30 until 6:00 o'clock, the meeting concluded to appoint a committee of six to go into the subject in detail, and either to report back to the organizations which had sent delegates to the meeting or to the meeting of the whole committee. The committee named is as follows: Miss Julia Lathrop, Mr. Sherman Kingsley, Dr. J. W. Kerr, Dr. Philip Van Ingen, Dr. Meanes, and Dr. Green.

A HOSPITAL CIRCULATING LIBRARY

The Ladies' Auxiliary the Proper Body to Have Charge—Some Suggestions as to Management

In these days of rapid advance in medical research, surgical perfectedness, and hospital completeness of technic, many things are being tried, and often as quickly discarded because lacking in essential requirements. This one fact, however (and it is one which has always distinguished the American from the European hospital), has come to stay—nothing which will give the patient greater ease of mind and body, nothing which will shorten the actual confinement, nothing which will show you know the patient is human and not a mere "case," is too small to hold the attention of the attending physician and the hospital administrator.

We give our patients quiet, a beautiful outlook, provide easy beds, accessible electrotherapeutic and hydrotherapeutic equipment if we have the money, or perhaps basket weaving or clay modeling, to assist in the recovery and pass the time pleasantly; all of which things may have virtue in their own way, but there is a simple thing very often overlooked which any hospital, however small or weak financially, can and should have, and that is a circulating library for the general use of its patients.

Not all patients can or are allowed to read, it is true, but a large majority are permitted by the attending

physician to pass at least a part of the day in this way. For those who can read it should be the duty of every hospital, big or little, rich or poor, to have an accessible, readable, clean lot of books at hand. How can it be done?

Try this: Let it be generally known (start with the members of your board of directors or the board of lady managers) that you can use any good book of fiction, interesting geographical or historical work, not forgetting the children's books, and it will surprise you how quickly three or four hundred books will appear on your shelves; not "the latest," perhaps, but just as good for your purpose. They have all been read by the family and are now only in the way; of course, the lady of the house is glad to send them to you, just "to get rid of them."

Light fiction or interesting geographical stories will be found the most popular. In fact, one is surprised to see this or that litterateur or college professor reading a "Nick Carter" with relish while in the hospital. It must be quite "light" in order to hold the attention. Have the real, good, solid matter available, too, but do not expect it to be popular.

You now have the books. Proceed to list them in a

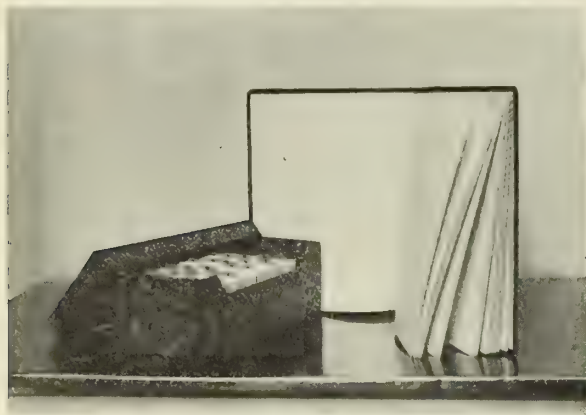


Fig. 1. Library record.

plain record book, size about 10 to 12 inches, of 100 pages or more, with ruled columns as illustrated in the accompanying illustration (Fig. 1.) for "Accession Number," "Class," "Call Number," "Author," and "Title," grouping the fiction by themselves as "Class A," the children's as "Class B," and all others as "Class M."

This may not be according to the classification of the American Library Association, but it is better for your purpose. You remember you want something accessible, and this means no "red tape."

Your books are now listed. Stamp, or with a book plate mark each one after the following manner:

Ohio Valley General Hospital

CIRCULATING LIBRARY

Vol. No., the gift of

.....
PLEASE RETURN TO LIBRARY PROMPTLY.

It is well to give the donor credit in each book. This will stimulate other gifts. Place in the proper space the "Call Number" of this book. Then, on the outside, using a small Dennison label, again place the "Call Number" on the back of the book. Then double index each book, having one card for the author, the other for the title, as illus-

trated in the accompanying illustration (Fig. 2). Place in the lower left-hand corner the "Accession Number," and on the remaining space any explanation regarding the book which you may desire. For this purpose, use an ordinary stock size 3x5-inch card, which may be had from any stationer for a very small sum, and, to begin with, a small transfer card tray, costing not more than 75 cents, will be entirely adequate. Your books are now catalogued and ready to be placed on the shelves. If you have some attractive spot in which to shelve them, and where convalescents may come and read, so much the better; if not, any closet with plain shelves will do.

To get your books in the hands of your patients, have a loose-leaf memorandum book, with "Fiction" listed by itself, and the other divisions by themselves in alphabetical order, the titles and the authors separately. Use a loose-leaf, so that when additions are made from month to month, they may be added very easily for a period of, say, one year, and then, when the annual inventory is taken, the whole catalogue may be made over. Have one of these catalogues in each natural division of the hospital, each ward or floor, and encourage your patients to use it, and it will surprise you how many calls you will have for your books. In the front of this loose-leaf catalogue it is well

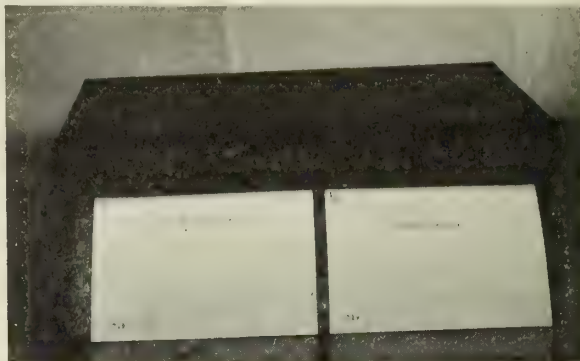


Fig. 2. Method of keeping library cards.

to have a few simple rules pasted. The following might be suggested:

"This library is provided through the kindness of our friends, and in it you will find a number of books which will help you to while away the hours. Make free use of these books.

"In asking for books, mention to your nurse the number only, as they are catalogued in order.

"As soon as you have finished with a book, return it to the library for credit, for it will be charged in your name. Should another patient wish the same book, it will then be charged out to that patient, and you will no longer be responsible for it.

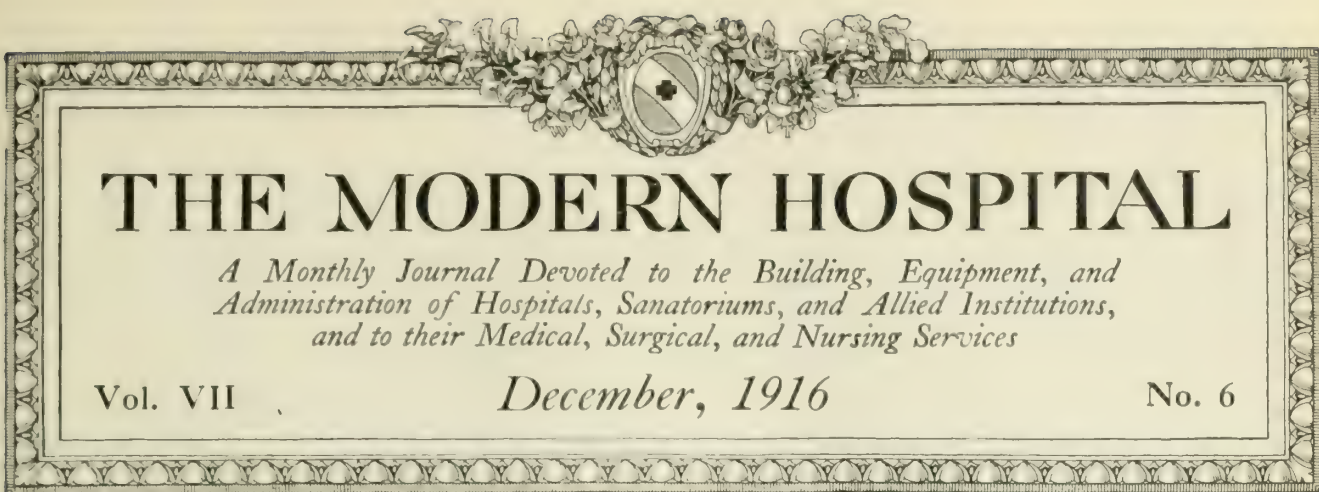
"Should you wish to make a donation to the library, gifts of books, or money, they will be greatly appreciated."

To be sure, if there are funds available, have the catalogue printed and in sufficient number to place a copy in every room or ward, but keep it up to date and revise it annually.

To obtain a book, the patient simply writes the number on a slip of paper, or the nurse does it for him; the nurse or messenger takes or sends it to the office, or, if there is a librarian, to the librarian, and the book is at once sent to the patient. As soon as it is read, it is returned to the library to be checked off. In the library a memorandum book is kept of the date when the book was taken out, its number, and the patient's name and room number.

As soon as a book is worn or soiled by general use, it should be discarded; always keep the stock fresh and attractive. A paper cover, to be changed each time the book goes out, would not be expensive.

PLINY O. CLARK.



THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. VII

December, 1916

No. 6

FIRST UNITS OF THE NEW BUFFALO CITY HOSPITAL

Homogeneous Group That May Be Constructed Piecemeal Always Retaining Good Architectural and Administrative Form—Some of the Principles That Must Be Regarded by Architects

BY MESSRS. GREEN & WICKS, ARCHITECTS, BUFFALO

IN designing a successful hospital, a knowledge of medical and surgical science and of practical operating conditions is required, combined with architectural and engineering ability. The patient's comfort also must be given great consideration by the architect, as rest, quiet, and mental peace contribute in a great measure to the benefits derived from proper medical care.

In operation the hospital is much like a factory—the patients, who are the new material, being received, inspected, recorded, and classified, are sent to the various departments for development to the final state, when they may be dismissed from the hospital.

The plan of the building must be such as to give the patients every advantage in the practice of surgery and medicine, and the comforts of proper sunlight, fresh air, quiet, and easy access to the various places in the hospital which they are to visit, such as the dining rooms, library, chapel, sun parlors, and surrounding grounds.

In order to accomplish satisfactory results, the layout must be such as to make the routine work of doctors, interns, and nurses as simple and easy of accomplishment as possible. All work should follow in easy sequence. The receiving, checking, and storage of food, the preparation of meals and their distribution to the patients, the method of caring for soiled linen and the refuse from the kitchens, all present problems which must be given consideration at the very outset.

Tunnels connecting hospital groups provide excellent means of communication between buildings, and are invaluable to economical and efficient

operation where the distribution of supplies and the disposal of soiled or waste material are a constant necessity. They also serve as runways for heating, lighting, plumbing, and power lines, and as highways of distribution for all supplies. These tunnels may be made to form the basements of corridors or pipe spaces under the roadways and walks. The corridors being built over these tunnels connect all buildings of the group, and afford excellent means of communication between the various units; and, if of open construction—that is, with windows so that they may be at once thrown open or tightly closed as desired—they afford much additional space for the use of ambulatory patients.

The size of hospitals must vary greatly, depending on the diseases to be treated, the number and classes of patients accommodated, the restrictions of the site, the funds available for the construction of the buildings, the equipment, the maintenance, and many other considerations. Hospitals are often too large for the maintenance obtainable, or too much money is put into the construction when it should be retained for the care and upkeep.

In the case of a tuberculosis hospital the size should be determined by the prevalence of the disease and the population of the district which it is to accommodate. Vital statistics of the boards of health in various cities show fairly accurately the number of deaths in each year from tuberculosis, but cannot be relied on absolutely owing to the desire of some families to conceal the knowledge of the presence of the disease, and the willingness of

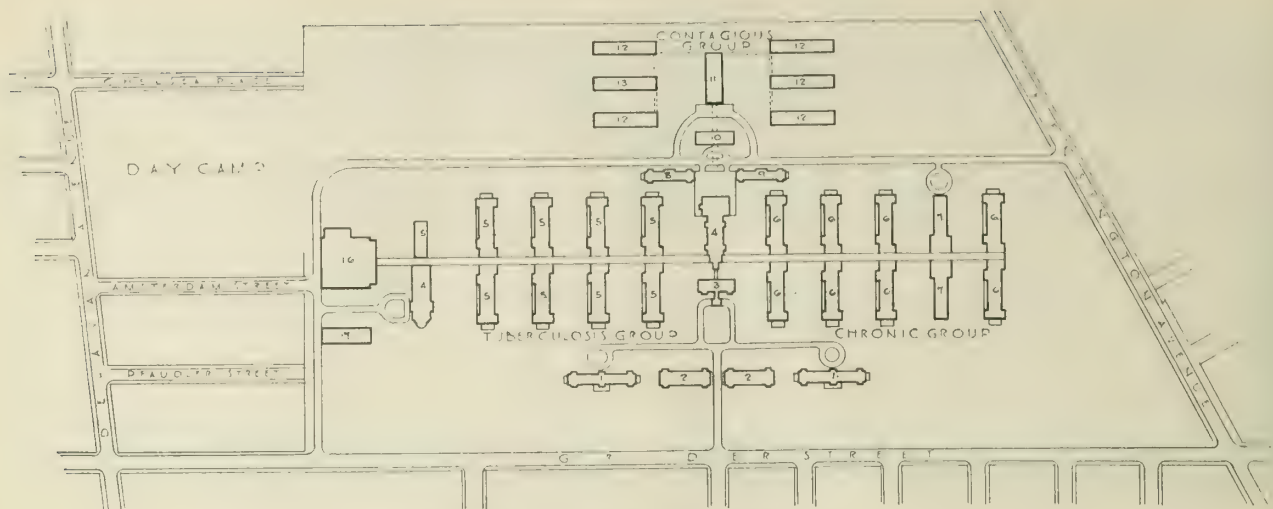


Fig. 1. Buffalo City Hospital. Plot plan.

- | | | | | |
|-----------------------------|-------------------------------|---------------------------|-------------------------|---|
| 1. Nurses' home. | 4. Service building. | 7. Operating building. | CONTAGIOUS GROUP. | 14. Pathological building. |
| 2. Administration building. | 5. Tuberculosis ward. | 8. Female help building. | 10. Receiving building. | 15. Linen and help building. |
| 3. Receiving building. | 6. Medical and surgical ward. | 9. Psychopathic building. | 11. Service building. | 16. Boiler, engine, and laundry building. |
| | | | 12. Contagious ward. | 17. Garage and shop. |
| | | | 13. Nurses' home. | |

some physicians to sometimes ascribe the death to other causes. For the same reasons, it is difficult to obtain registration of persons afflicted with the disease and, as they travel about from city to country, or to other cities, their record may not be taken until several months after arrival. In addition, the vital statistics in many cities are not very accurately or systematically kept. It is certain, therefore, that when the size of the hospital is determined from registered vital statistics, it will never be too large.

The arrangement of a tuberculosis hospital should generally consist of elastic groups formed of minor units of single buildings, so that an initial center, side, or end may be constructed at the outset, containing the essentials of administration,

service, and patients' space. Thus the hospital plant may grow from time to time for greater service in a methodical and economical manner.

The orientation of the buildings, the convenience of arrangement for comfort, service, segregation, etc., have an important bearing on the design, and the structure should be simple, plain, economical, and as homelike as possible.

The ideal hospital will contain the foregoing suggestions and many other important ideas, and will be so arranged, constructed, and administered as to make each patient realize on leaving that his stay has been made as comfortable and pleasant as possible. An architect is, or should be, an "editor." He must gather and receive all facts and "publish" them in the resulting hospital.



Fig. 2. Buffalo City Hospital. Administration building.



Fig. 3. Buffalo City Hospital. Receiving and service building.

In the new Buffalo City Hospital Dr. Edward J. Meyer and his commission have been gathering information for a long period, visiting other hospitals in America and foreign countries. The architects have been doing the same, and the knowledge so obtained, taken with practical considerations, has made the resultant arrangements.

The site known as the West Farm, consisting of eighty-two acres, is situated near the northern border of Buffalo in the highest section of the city. The long side of the property faces east toward Grider street, the main thoroughfare of that portion of the city. It consists of a beautiful upland, the old farm having for these many years remained in one tract. The property is bounded on the north by Kensington avenue, which is still undeveloped, on the east by Grider street, on the south by Delevan avenue, and on the

west by open property. The site is approached from the city center by trolley cars through Grider street, and a railroad freight line may be conveniently utilized from the belt line surrounding the city.

The city has bonded itself to the amount of \$600,000 for the initial work of this undertaking, and it is expected that the

fully completed hospital will cost about \$3,000,000.

In planning the group of buildings for this hospital, there was laid out as a beginning an ideal unit hospital building. It will be observed by examining the

plan that the ward and private patients' rooms occupy the sunny portion, and that the entrance halls, stair halls, and elevator spaces are placed in the northeast

or northwest corners, and that all utility rooms are placed on the north side of the buildings. This unit plan forms the hospital buildings into



Fig. 4. Buffalo City Hospital. Receiving building. Front elevation.

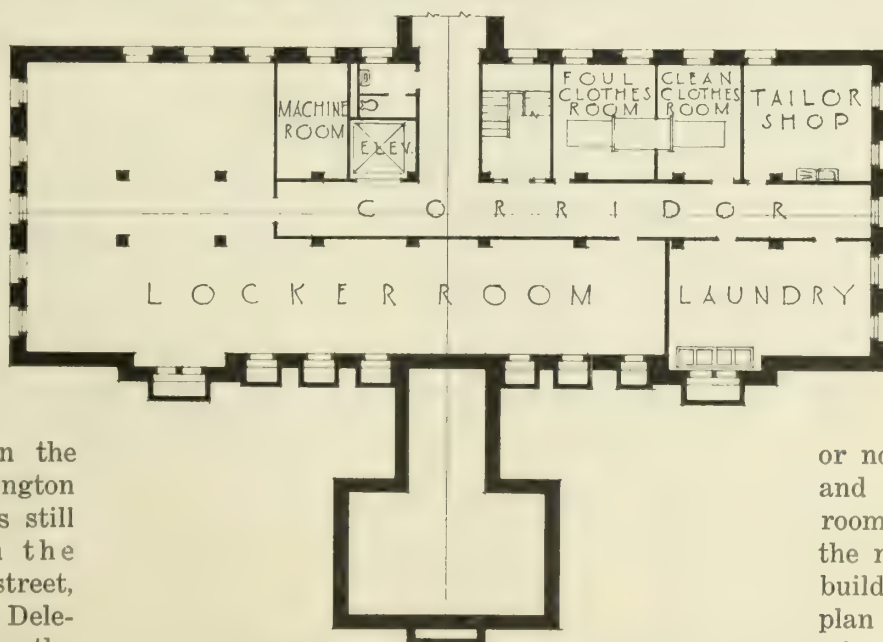


Fig. 5. Buffalo City Hospital. Receiving building. Basement floor plan.

pairs, arranged on the opposite sides of the main or central corridor. This plan will materially reduce the cost of construction over the usual method of court and double corridors, and the saving in distances of travel in operation will be very great.

The entrance to each ward unit is reached through the single main connecting corridor. The plan is the double ward plan, with a service corridor extending through the utility section, save that the only utility room opening on the main corridor is the stair and elevator hall. All other utility rooms are placed on the north side of the ward units, opening directly from the ward corridors. The main or central corridor, being 20 feet wide, may be used as a porch and sun rooms, or the windows may be fully opened and each pair of wards cut off from every other pair, thus giving complete isolation. Each side of the main corridor opens to courts between the ward units, which gives a greater sweep of fresh air than in the double corridor and court system. The plan is comprehensive, yet elastic, so that one or more units may be added from time to time without interference with

units already built, and so that they will work in naturally with the conduct of the institution. The ultimate size of the hospital will provide for 2,000 patients.

The complete hospital plan provides for the treatment of advanced cases of tuberculosis as well as for all chronic and conta-

gious diseases of the indigent poor. At present there is being built a portion of the tuberculosis division, consisting of twin hospitals, to accommodate 270 patients; a psychopathic building, to house 25 patients; a women's help building which is to be used at the outset as a

nurses' home; and a service building, for the combined accommodation of the administration offices, staff's dining rooms, kitchens, laundry, store rooms, and boiler house. There is also provided in this building a temporary entertainment hall and rooms for recreation. Later, as the plan develops, the administration, boiler, and laundry departments will be placed in separate buildings.

The administration building is placed at the front and at the center of the hospital group, so that all patients, doctors, nurses, interns, etc., may be recorded on arrival, and so that the shortest distances possible may exist between it and the remote parts of the hospital.

The receiving building and detention ward are placed just at the west of the administration building. In this building all patients, after being admitted, are examined, diagnosed, classified, out-

fitted, and sent to the various divisions of the hospital. When they leave the hospital they are dismissed from this building. The receiving building has a large reception room arranged for men on one side and women on the other side. Adjoining this reception room are the examination rooms. If there is need of further diag-

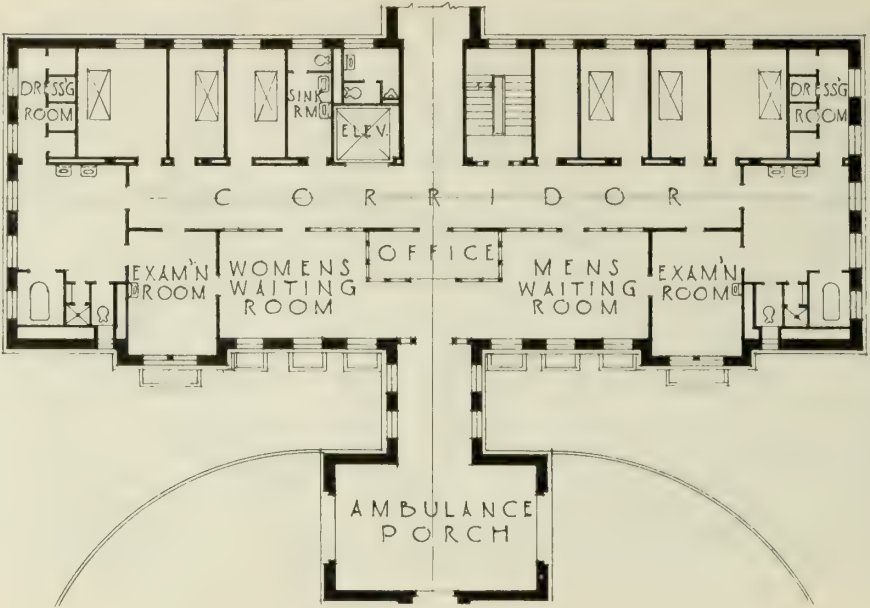


Fig. 6. Buffalo City Hospital. Receiving building. First floor plan.

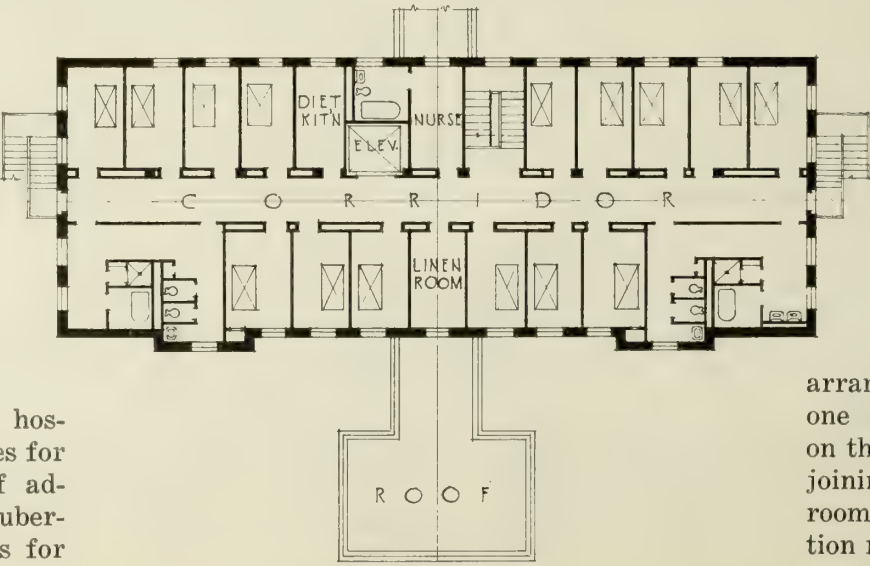


Fig. 7. Buffalo City Hospital. Receiving building. Second floor plan.

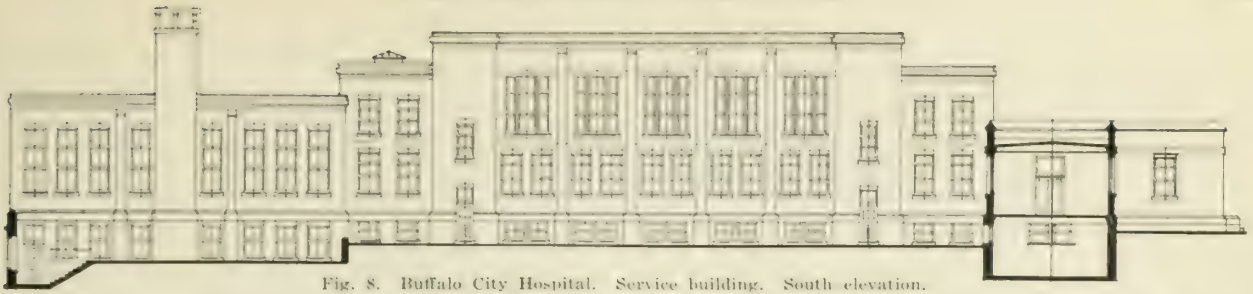


Fig. 8. Buffalo City Hospital. Service building. South elevation.

nosis or consultation as to any case, the patient is placed in the detention ward in the second story of this building to await further development, so

The main corridor, extending north and south and running between all hospital buildings, is extended from the receiving building to the hospital

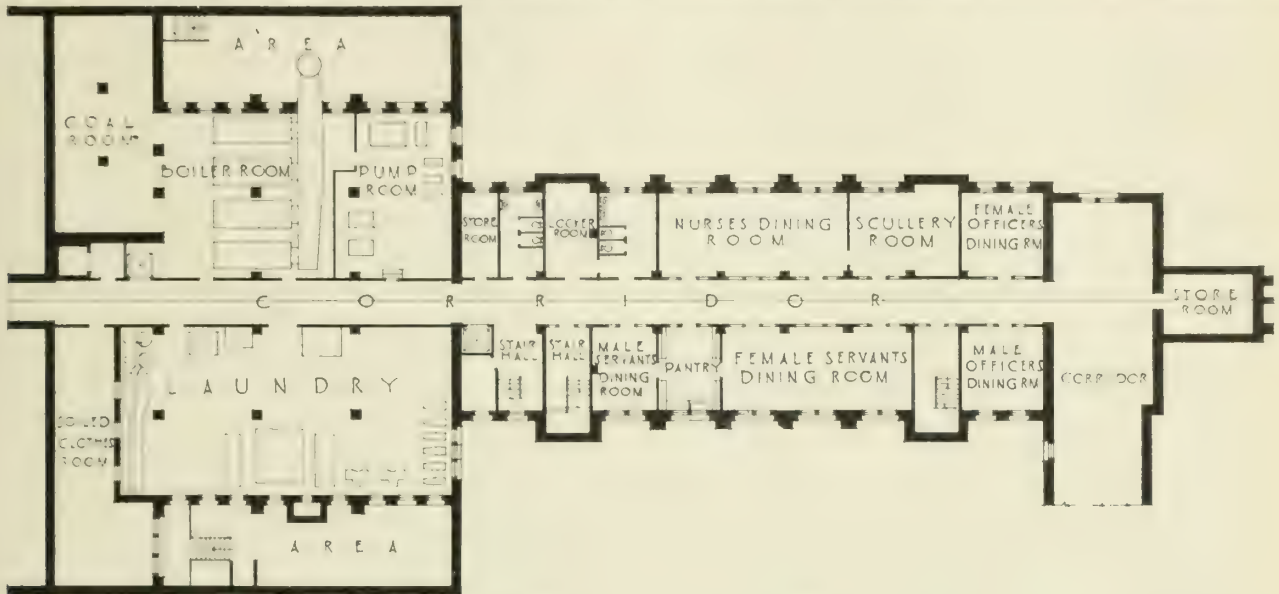


Fig. 9. Buffalo City Hospital. Service building. Basement floor plan.

that he may be sent to the proper division of the hospital or to other hospitals. Locker rooms, sterilizing rooms, and rest rooms are all at hand, giving the best facilities for handling each case.

buildings at the extreme north and south ends of the group.

The service building on the west side of the main corridor is placed on the east and west axis

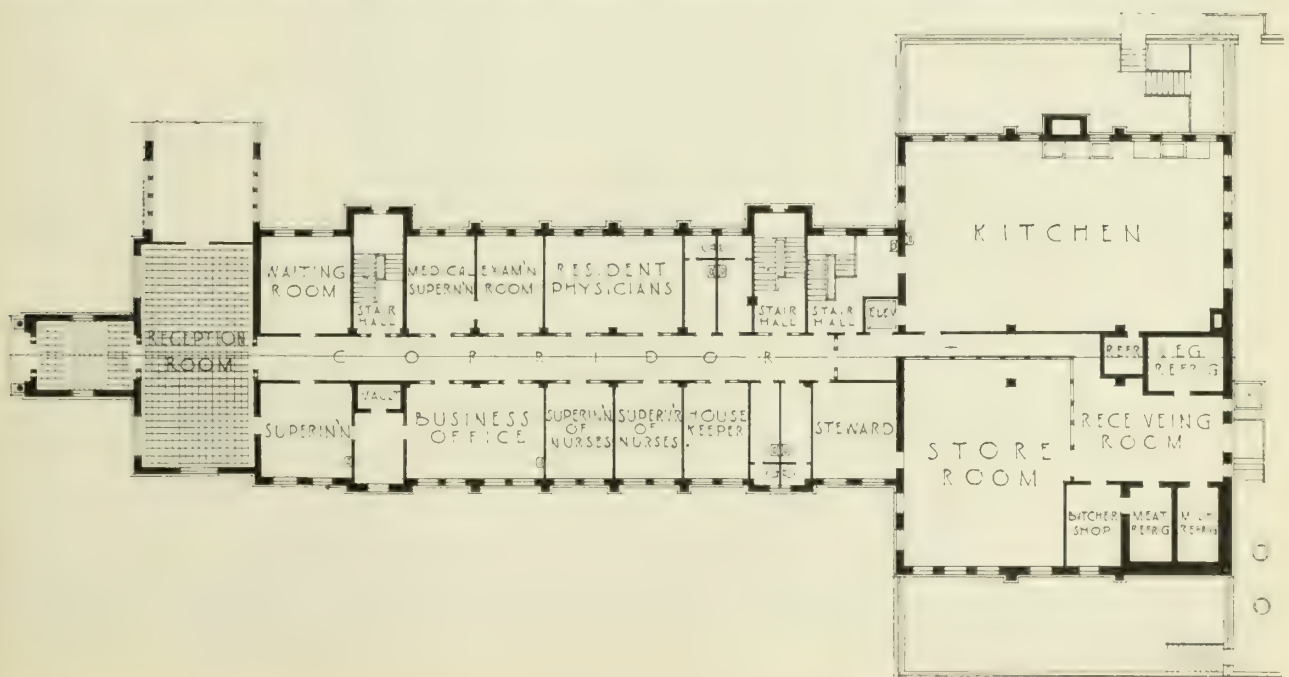


Fig. 10. Buffalo City Hospital. Service building. First floor plan.

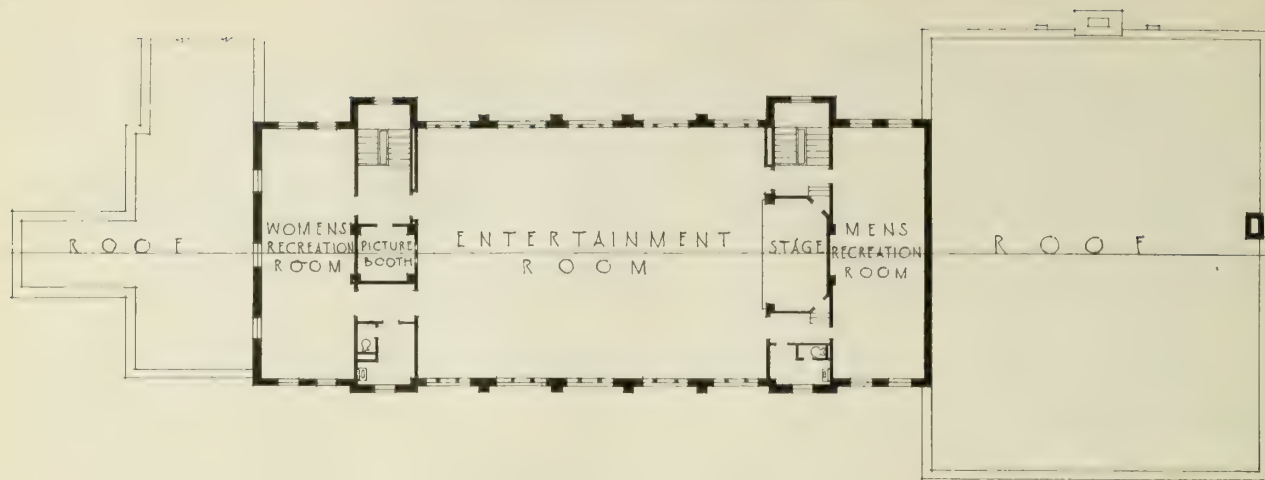


Fig. 11. Buffalo City Hospital. Service building. Second floor plan.

line, as are the administration and receiving buildings. Here are provided the necessary rooms for all supplies, the main and minor storage rooms, refrigerators, etc., the kitchens, pantries, and the dining rooms for all principals, nurses, help, etc.

The power plant, containing boilers, engines, coal storage, and laundry, is placed at the south of all buildings and on the center line of the central corridor, which forms the main axis of the entire group.

The nurses' home buildings are placed near the administration building, one on either side of the east and west axis line, the one at the south being for the nurses of the tuberculosis wards, and the one at the north for all others except those on contagious cases.

The ward buildings extending east and west from the central corridor are each three stories and basement in height. Each floor accommodates 45 patients, and each story has been planned as a separate hospital, so that the desirable classification of inmates is possible. The first story of each ward building is entered through a hall opening out of the main connecting corridor, and the second and third stories of these hospitals are reached from the hall of the first story by staircase or elevator. There is in the second story of each hospital an exit from the stair hall to the roof of the main corridor. Patients are cared for in 8-bed, 4-bed, or single-bed wards, having windows opening to the east, south, or west. The 8-bed wards have windows opening in two directions.

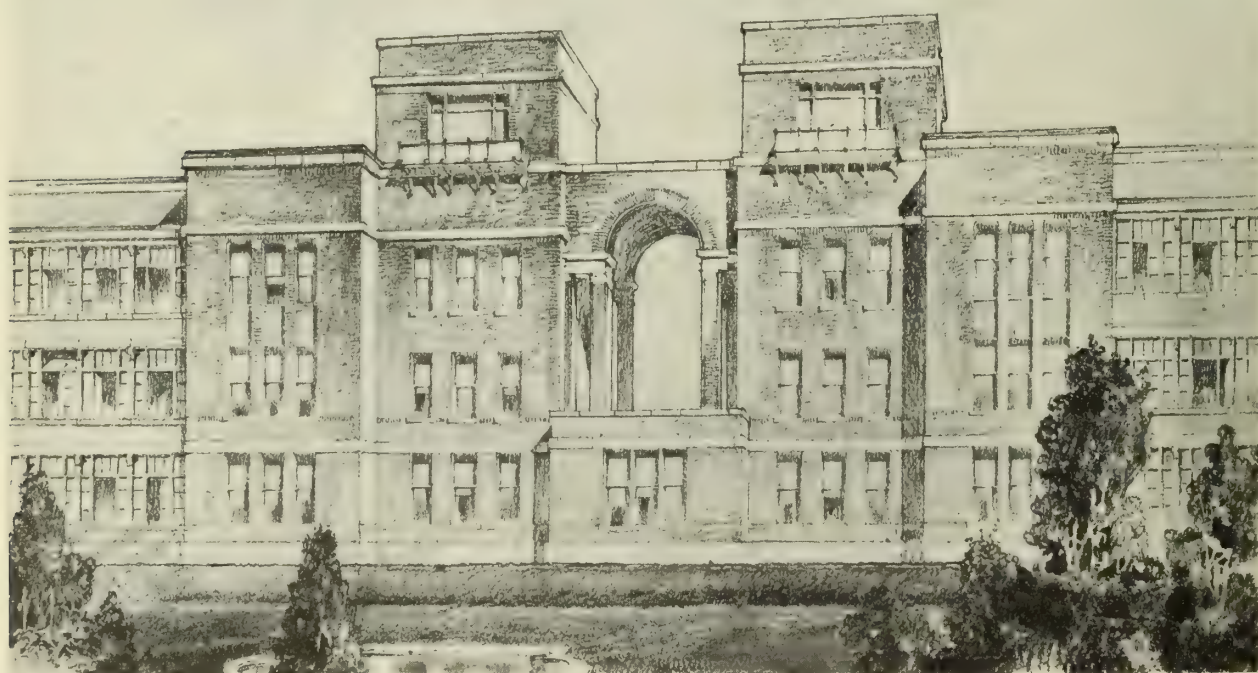


Fig. 12. Buffalo City Hospital. Tuberculosis ward.

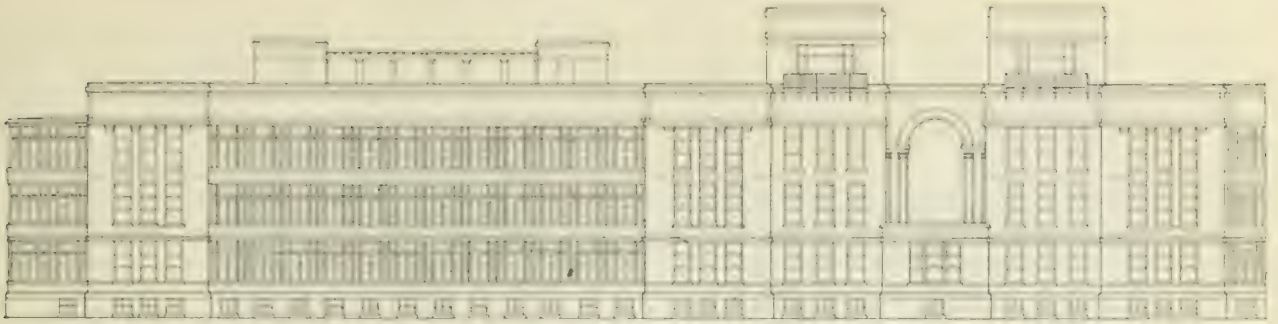


Fig. 13. Buffalo City Hospital. Tuberculosis ward. Front elevation.

The arrangement of the private rooms is such that three of the single rooms may be used by patients seriously ill without disturbance to the patients in general.

Each of these divisional hospitals is supplied on

the department of health of the city of Buffalo, having racks upon which the food containers in the form of pails are suspended. Such a cart is easily cleaned, light to handle, and the containers, always hanging in a vertical position, are non-

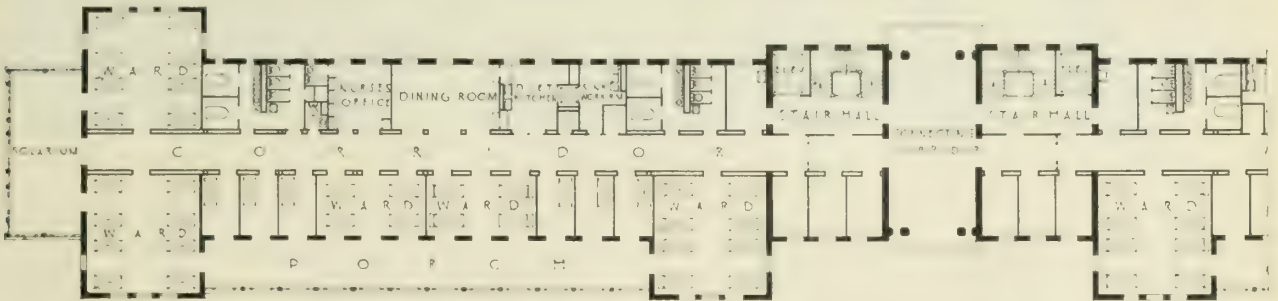


Fig. 14. Buffalo City Hospital. Tuberculosis ward. Second floor plan. The first floor plan is similar to the second floor.

each floor with a separate kitchen and dining room for the reason that in advanced tubercular cases many of the patients are confined to their beds. Food will be brought from the main kitchen in

spilling in passing inclines. The pails on these carts are made of tinned copper, of established sizes to fit the warming rings in the diet kitchen steam tables, so that the food may be kept hot

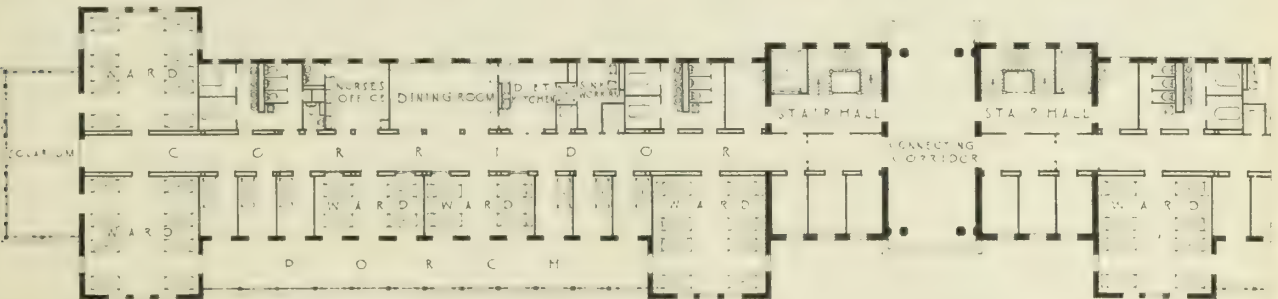


Fig. 15. Buffalo City Hospital. Tuberculosis ward. Third floor plan.

the service building by electric carts—not the ordinary box cart, which is so difficult to keep clean and is so cumbersome to operate—but a cart of an entirely new type invented by Dr. Goodale, of

while serving. The food carts are raised by an electric lift from the basements to each floor in a perfected airtight shaft.

Windows have been provided between the cor-

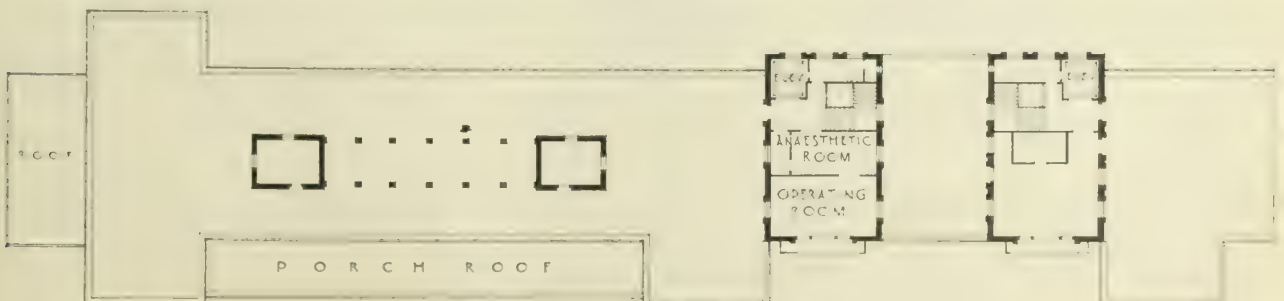


Fig. 16. Buffalo City Hospital. Tuberculosis ward. Roof and pent house plan.

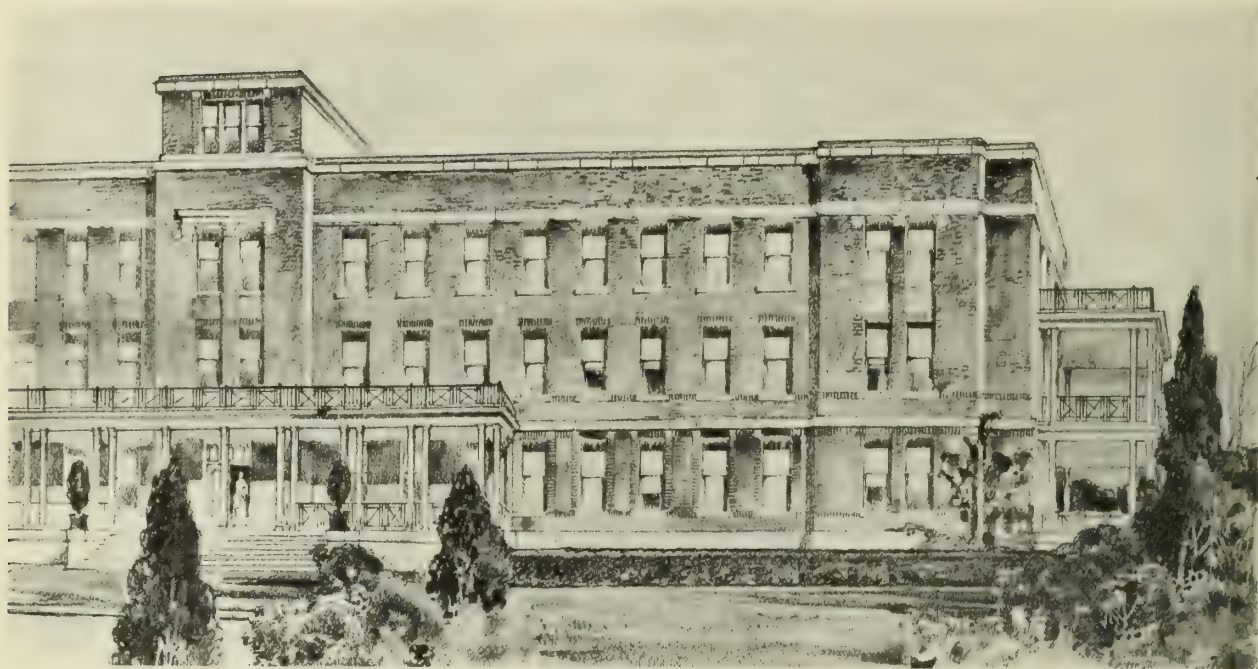


Fig. 17. Buffalo City Hospital. Nurses' home.

ridors and ward rooms, so that the patients may be observed from the corridors if desired. In each patient's room is supplied at the head of the bed a ventilated metal locker, where such clothes, etc.,

frequently used. Each patient will also be supplied with the usual bedside table and chair. The windows throughout the ward buildings are divided into three equal-weighted sash of the slid-



Fig. 18. Buffalo City Hospital. Nurses' home. Front elevation.

as are permitted are stored after having been sterilized. This arrangement is in lieu of the usual locker room, which is so inconvenient and causes trouble among the patients. General locker rooms, however, are supplied for articles which are in-

ing variety, thus making it possible to have the top, middle, or bottom sections opened, or, if desired, two-thirds of the window may be opened. Every ward and private room opens onto the main porch to the south or the solariums to the east and

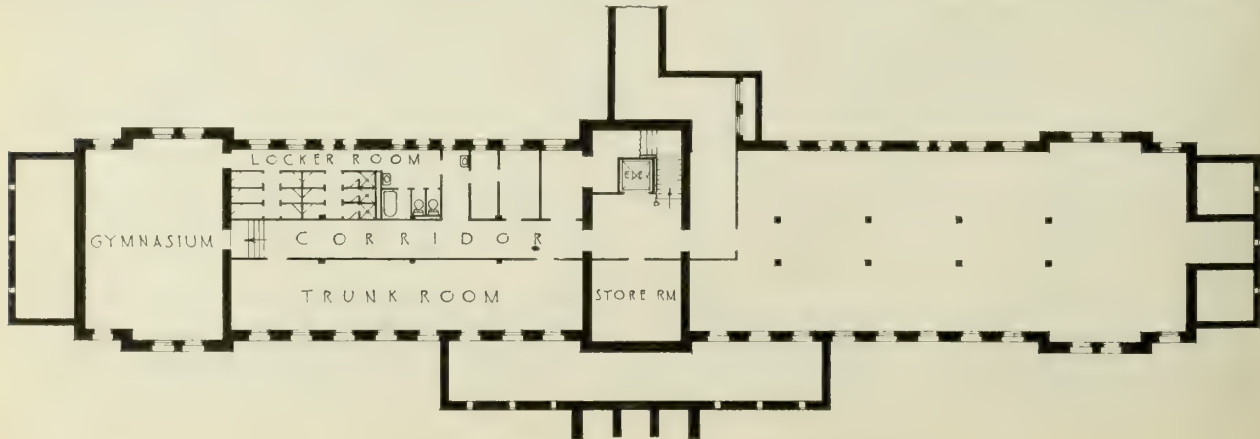


Fig. 19. Buffalo City Hospital. Nurses' home. Basement floor plan.

west, which are of such size that every bed in the hospital may be placed on them at one time if desired. The porches are to be inclosed, but in such a manner that they may be opened when desired. The dining rooms are open to the corridors, and all rooms, except the utility rooms, have transoms over the corridor doors. The utility rooms on the north side of the buildings occupy all the space save that used for dining rooms, treatment rooms, staircases, etc.

then pass through the repair shop to the storage rooms, where they are held for distribution.

The first floor line of the buildings is placed 6 feet above the established grade, so that all basement rooms and corridors will be well lighted and ventilated. The rooms in the basement of the ward buildings at present under construction are used for a chapel, x-ray apparatus, morgue, barber shop, storage, etc.

The buildings are fireproof throughout, outside

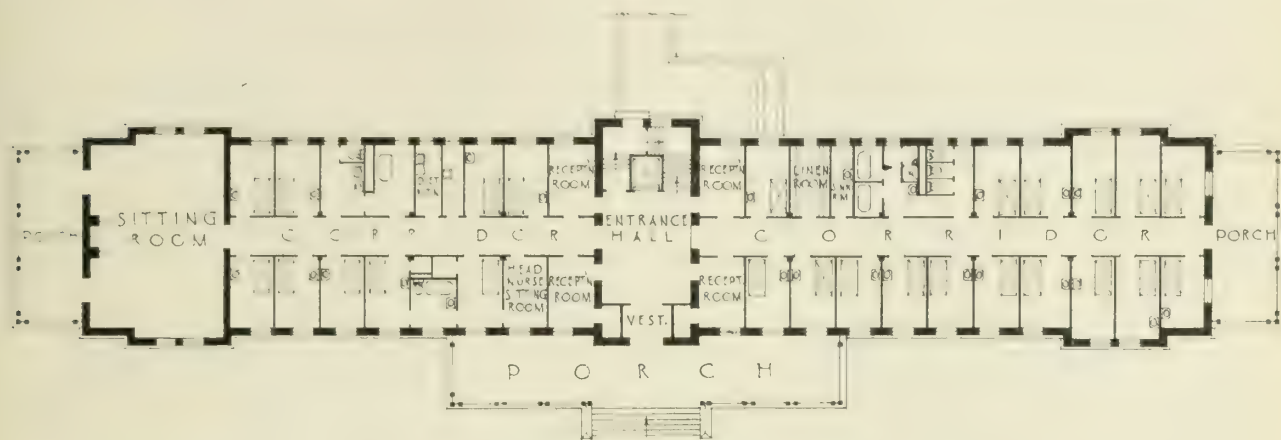


Fig. 20. Buffalo City Hospital. Nurses' home. First floor plan.

The diet kitchens on each floor adjoin the dining rooms. The food, after being dished up, is passed through a slide directly into the dining room. The soiled dishes are returned to the kitchen through a similar opening, and go directly to the scraping counter, wash sink, rinsing sink, and sterilizer in succession, after which they are placed upon the storage shelves in connection with steam tables. Adjoining each diet kitchen is an

walls being faced with a light-gray brick. The floors are of reinforced concrete supported on steel beams. All partitions are of tile. There is no wood used except for the doors, sash, and window frames. All rooms and halls have a coved concrete or terrazzo base, flush with the plastered walls and with the finished floor material. The base joins the iron shoe at the bottom of the door frames, which extends through the jambs and

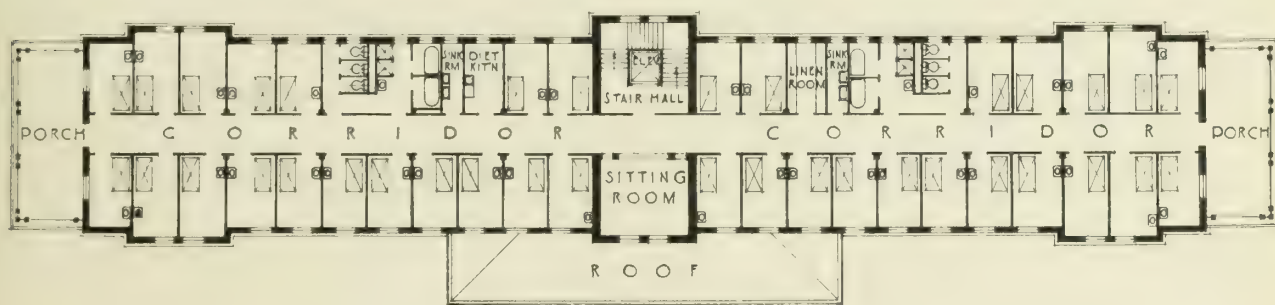


Fig. 21. Buffalo City Hospital. Nurses' home. Second floor plan.

incinerator room, where all refuse is burned in powerful destructors. In the nurses' work rooms the soiled linen is bagged in carefully tied packages before sending to the laundry, and the bags as well as the linen are washed, sterilized, ironed, and repaired before returning to the linen storage, from which they are distributed to the various hospital floors. The mattresses and beds are taken to the basements by the elevators, through the service corridors to the sterilizing rooms, and

meets the base on the opposite side. No doors or windows have any wood or metal trim, and all door frames are made of heavy-gauge steel, placed so that the jambs finish flush with the plastering. All corridor floors in the basements, in the stair halls of upper stories, and in the main kitchen and store rooms are laid with quarry tile. The floors of all other corridors, dining rooms, wards, and private rooms are of concrete, covered with battleship linoleum.

On the fourth floor of one of the ward buildings now being erected is an operating suite, reached by the elevator and main stairs. Adjoining the operating room is the anesthetic room, wash-up rooms, etc.

The elevator and stair hall on the fourth floor open onto the roof, which will be fitted up for the use of patients as a promenade and open-air porch. Pergolas extend the length of the building to provide shade during the hot days and shelter from rain. There will also be erected along the parapet walls glass wind shields to shut off the chilling winds of early spring and late fall.

The roofs will be laid with quarry tile to give a smooth surface, so that patients who are confined to their beds can be wheeled out when conditions permit.

The buildings are heated by a pumped hot water system, direct radiation being placed in the

rooms. All utility rooms have extraction flues extending to roof chambers, where suction fans are placed. The system of forcing tempered air through flues being considered cumbersome, expensive, noisy, and unsanitary in a hospital—for flues are apt to be filled with disease germs—the open-window system of ventilation has been adopted. The usual fan system works well in closed rooms, but, when windows are to be opened as much as they will be in a tuberculosis hospital, the system of direct radiation was considered to be more advantageous.

The board of managers of the hospital is composed as follows: Dr. Edward J. Meyer, president; Frank L. Bapst, vice-president; Thomas W. Jordan, secretary; Albert F. Laub, Michael F. Dirnberger, Jr.

The general contractor is George Baker Long, of Worcester, Mass.

FOUR YEARS OF THE WASHINGTON COUNTY (IOWA) HOSPITAL

The First Institution Created Under the Iowa County Hospital Law Has Served the Patients, the Public, and the Physicians—Could Not Now Do Without It

BY C. A. BOICE, M. D., WASHINGTON, IOWA

THE first county hospital in Iowa erected and maintained by a direct vote of the electors (and that makes it the first hospital of that kind in the world), has just completed its first four years of service, and the time is opportune that we take stock and give the reasons for our existence, and see if, happily, we have done a good work and have proved our reason for being. Do county, or so-called community, hospitals have a place in the state life? Have the fruits been such that we can recommend other communities (of which the county is the unit) to follow our example, and build and maintain such institutions for the cure and alleviation of disease, to educate both doctors and laity to prevent as well as treat, to educate everyone to the higher needs of present-day life, and to make better doctors and a healthier and a happier people?

So far but one other county (Jefferson) has succeeded in following our example. Altogether some twenty Iowa counties have made the effort, but for apparently sufficient reasons only the counties of Washington and Jefferson (named for the leaders and founders of our national existence) have been permitted to blaze the way along this phase of communistic progress.

The method of conducting the campaign for our county hospital was the result of long and intimate study of local needs and conditions by the author. This method was followed quite closely

by the committee in Jefferson county. The method was outlined in detail in a paper I published in *THE MODERN HOSPITAL*, April, 1915, and has been made the basis of special articles in *The World's Work*, July, 1915; *Good Housekeeping*, and *The Country Gentleman*, July, 1916. The law which authorizes such hospitals provides that a petition signed by at least 200 freeholders be filed with the board of supervisors in time so that the board may publish the required legal notice full ninety days in advance of the time of election. The question may be voted on at any regular election or at a called special election. The petition and notice must specify the millage tax per year, and the same may not run to exceed twenty years. The hospital is governed by a board of seven trustees, who are first appointed by the board of supervisors and thereafter elected as are other officers. They serve without salary.

The important points in the campaign are: (1) have the movement fathered by some county-wide organization, the medical society in lieu of any other—certainly every physician should sign the preliminary petition; (2) the campaign should be conducted by a small committee with large powers (my idea of the size of the committee is three, of whom two are "dead"—then it is no trouble to get committee meetings and initiate proceedings); (3) no active work to excite criticism should be done until the last week or ten days

preceding the election, and then it should be a whirlwind affair, and every possible wire should be pulled to make votes.

The Washington County Hospital was opened for work on July 16, 1912. It is a fireproof, three-story, 40x80 building, has nineteen private rooms and two wards. The capacity is 35 or 40 patients. The total cost at time of opening was \$41,000, of which \$9,200 was contributed—\$3,700 for land and \$5,500 for furnishings. Every cent of the county money—1 mill tax for four years, \$32,000—went into the building proper.

From July 16, 1912, to July 31, 1916, 1,000 persons have been cared for in the hospital. Of these, 460 have undergone major surgical procedures, 163 have been medical cases (exclusive of 62 babies after birth), 171 have had tonsillectomies and adenoidectomies (when indicated). There have been 67 confinement cases.

The benefits or value of the hospital can well be examined under these three headings:

1. Value to the patients.
2. Value to the general public or community.
3. Value to the physicians.

1. Has the hospital been worth while to these 1,000 people? Has it rendered a service which they could not have had at home, or could they have been transported to some larger city for efficient care? In the campaign we told people that the hospital would give care to many who would not or could not go away from home. Someone has said that hospitals in the smaller cities and towns deserve to rank, alongside the discovery of anesthetics, as among the most important advancements of medicine and surgery of the past century. No philanthropy nor charity appeals so strongly to our nature as placing within easy reach the means of relieving the sick and wounded sufferers in every community.

One of our large taxpayers worked for the hospital, saying that he did not believe in this Montgomery-Ward-Sears-Roebuck method of caring for sick people by shipping them away from home, but that we should be prepared to care for them in our own community.

Considering the major surgical work of 460 cases, a considerable number of them could have been transported safely reasonable distances, but they have remained near home and friends, have been cared for by known and interested nurses and their own family physician—conditions which are frequently of inestimable value to insure rapid convalescence.

The emergency cases, of which there have been a considerable number, could not have been transported safely long distances. The outcome of these cases has been exceptionally good because atten-

tion has been given in such a short time. Many have been operated on within two hours of the onset of the emergency. These cases have included appendicitis in its severe forms, gangrenous gall-bladders, cesarean section, strangulated hernias, intestinal and ureteral obstructions, fractures, etc. We recall quite vividly three men in particular who actively opposed the hospital. Two of them were later brought in with gangrenous appendices and the other with a gangrenous gall-bladder. Early operation saved all three. Is it necessary to say that these three men are not now "knocking" the hospital.

Of the medical cases, practically none would have received hospital care. They have here received care which in the home would have more than doubled the cost, and they have been free from the home worries and neighborhood nursing and gossip. This quiet and rest has a distinct value in treatment. Our medical work has not been large—163 out of 1,000 (not including 62 babies). We have no typhoid, and, of course, communicable diseases have not been admitted. Not a single typhoid case has originated in Washington county in over four years, and less than ten imported cases have been reported in that time.

Of the minor surgery, tonsillectomies, hemorrhoids, perineorrhaphies, etc., the greater number would not have been cared for. The presence of the hospital and the ability of some of us to do the work has encouraged the procedure, and the end results of these cases have been most gratifying.

Of the obstetrical cases, 67 in number, none would have had hospital care. These cases have received, all will admit, far better care than is possible in any home. In addition, they have received invaluable instructions in the care and feeding of the babies, and of the puerperium. Many complications of labor have been satisfactorily handled—breeches, placenta previa, cesarean section, etc.

As we have not as yet accepted the principle that it is the duty of the rich to care for the poor, the duty rests with the state or community. It is an accepted fact that a person who is actually ill with any serious illness requiring medical or surgical attention stands a much better chance of recovery if he receives treatment in a hospital. It is generally conceded that the well-equipped general hospital renders the best service. There can be no question that the benefits which have accrued to these 1,000 persons have been of considerable moment.

There have been 44 deaths in the hospital, of which 5 were still births, 18 were moribund on admission, 9 were known to be incurable, and in

12 there was some opportunity to save life or a surgical accident supervened. The death rate thus is $1\frac{1}{4}$ percent.

2. Does the hospital benefit the community? There can be no question that any well-equipped and well-conducted hospital is a distinct addition to the community life. It teaches people that there are improvements on the old established order of home and neighborhood nursing; it teaches them to expect and also to demand better care in diagnosis and treatment. The hospital should be and can be a center from which radiate influences for the betterment of community life, school hygiene, better babies and better food supply, the prophylaxis of infectious diseases, the prevention and treatment of tuberculosis. The law provides that a separate building may be erected for the care of the tuberculous, and another law provides that all Iowa counties shall provide for all indigent tuberculous. Our hospital has taught the community that good, satisfactory work—medical and surgical, with its essential after-care—can be done in the small community institution.

A large building, with its so-called "famous" attendant, is not the only essential requisite for good work, and by good work I mean curing the patient safely, quickly, and surely. It has taught people what good nursing is—that competent nursing is often half the battle. It has demonstrated that infections, post-operative and accidental, are not nearly so common nor virulent in small well-conducted institutions as they are in larger hospitals, with their greater number of infective cases. Our stitch abscesses and other post-operative infections have been practically nonexistent.

In my own work for the past year I have been using the McDonald solution exclusively. It is a mixture of acetone, 40 parts; denatured alcohol, 60 parts; and pyxol, 2 parts. I have found it entirely satisfactory, positively antiseptic, nonirritant, and economical. The late Dr. J. B. Murphy, in the 1916 issue, volume II, of "Practical Medicine," just off the press, says that this solution is superseding iodine.

In a previous communication before this society I mentioned our use of the continuous sponge. This has been a valuable educative feature in that it has demonstrated that we exercise every care and have made surgery somewhat safer.

3. The effect on physicians. County hospitals are open—that is, all reputable physicians of the county have equal rights. No physician is allowed on the board of trustees. The superintendent (a trained nurse) has complete authority within the building. If she thinks a physician is incompetent, she may deny him the privileges of

the hospital. Some may question this statement—some have questioned it; but if a physician is declared incompetent by the superintendent—and she backed by the board—I am sure such a physician so branded would have small chance of getting a mandamus from the court.

Has our hospital benefited the local physicians? Not the least of the byproducts of the hospital is its influence on the standards of local medical practice. Raising the standard of professional honor and practice is most important to any community. It has shown all what good surgery and good surgical conditions and surroundings mean; it has taught the value and importance of early diagnosis. Without the idea of criticism, I may say that it has taught some that cold water bottles, castor oil, and calomel are not good treatment for acute abdominal conditions; it has shown the value and the place of scientific nursing; it has taught the need of frequent consultations and conferences. It has demonstrated the value of complete tonsillectomy. Of the 171 such operations, not a single one has been followed by undue hemorrhage or mastoid involvement or any other complications.

Unfortunately, not all the doctors in the county use the hospital. For reasons unnecessary to mention here, some prefer to send their patients to other hospitals. Of those who do use the hospital, all freely admit its educative value, and say they are better doctors than they were four years ago. The hospital has amply demonstrated its power to educate, not only the patients, the public, the nurses, but the physician. The constant more or less close observation of each other's work has stimulated each one to do his best. The latent ability in each one has been developed, and I may safely say that each one has been benefited in proportion to what he has given. If he has been interested in his work, has recognized the hospital as an aid to better work, has examined himself carefully for faults and endeavored to correct them, that physician has grown immeasurably, and is a much better and a safer doctor than he formerly was. On the other hand, if he has looked at the hospital as merely a boarding-house for sick people (and we have such doctors in every community), he is very little better than formerly. One doctor, on being asked to teach in the training school, asked to be excused, as he didn't want to study any. I know of nothing to improve such cases of mental dry-rot except the services of the undertaker.

We see here demonstrated the biblical truth, "As man soweth so shall he reap." If he sows sparingly, he shall also reap sparingly; if he sows bountifully, he shall also reap bountifully.

Realizing the value of trained anesthetizers, we have encouraged one or two men to specially prepare for the work, and they give most of the anesthetics. Ether is used exclusively. We have not aspired to anesthetic fads and fancies, and have never in our limited experience had any serious complications.

The cost of operation is important. The hospital does not pay its way, and we never expect or desire it to do so. Being county property, it owes the community a duty, and we care for a consid-

erable number who pay little or nothing. The deficit is made up by the county, but the deficit is not as large as it seems. There are in every community a certain number of persons who must be cared for at public expense, and the county is merely caring for these people in the hospital instead of in the homes, and at a less expense; so we figure that the county is really making money by having the hospital.

The universal expression now is, "How did we get along without the hospital?"

ARMY AND NAVY GENERAL HOSPITAL AT HOT SPRINGS, ARK.

An Institution, Built Up Over a Period of Many Years, for Sick Soldiers and Sailors—Is of Good Architecture—Equipped With Most Modern Appliances—The Waters and Their Uses

By OUR SPECIAL CORRESPONDENT, WASHINGTON, D. C.

THE Army and Navy General Hospital, Hot Springs, Arkansas, was established in order to give the sick of the army and navy the benefit of the treatment obtained at the springs. The hospital occupies a portion of the government reservation. The lands embracing these wonderful healing springs were set apart as a reservation for the future disposal of the United States as early as 1832 (Act of Congress, approved April 20, 1832), although no active assumption of supervision was exercised until 1878. Under Government supervision the springs have been made a national health resort. There are about twenty-five individuals and corporations holding leases for hot water from the Government reservation, and in addition free baths are maintained for use of the indigent, the expense of which is defrayed from the rentals received. (Act of Congress, approved December 16, 1878.)

The construction of the buildings for the Army and Navy General Hospital was started in 1883, after plans prepared by J. L. Smithmeyer & Co., who were also the architects for the beautiful Congressional Library, which adorns the nation's capitol at Washington, D. C.

The first structures that were erected consisted of an administration building and two ward wings, and from time to time new buildings have been added to the group, consisting of bath house, power, heating and lighting plant, officers' quarters, reservoirs, store houses' female nurses' quarters, new hydrotherapeutic baths, etc.

Under the direction of the present commanding officer, Col. F. A. Winter, Medical Corps, United States Army, the following additions and buildings have been built or are in course of construction: barrack for the hospital corps detachment;

sergeants' quarters; garage; store house; additions to ward buildings; new operating suite; and general improvements and repairs to all the buildings.

Cases treated at this hospital are: rheumatism in its various forms and with its many complications, and nervous diseases and diseases of the digestive and respiratory systems. The special feature in the treatment of diseases at this hospital is the bath, which is administered in the various forms of tub, plunge, douche, vapor, electric, etc.

The supply of hot mineral water is obtained from a spring at the lower part of the west side of Hot Springs Mountain, and about 60 feet below the bath house. It flows at a temperature of 140 degrees Fahrenheit, and is one of the celebrated hot springs of the place, of which there are along the mountain side about 44, all within an area of 1200 feet in length by 300 feet in breadth. Its composition is given in an analysis by Professor David Dale Owen and Professor E. H. Larkin, as follows:

	Grains per gallon
Magnesium carbonate	0.13
Calcium carbonate	3.97
Sodium sulphate	0.38
Potassium sulphate	0.23
Calcium sulphate	0.11
Sodium chloride	0.01
Calcium silicate	0.46
Iodine and bromine, of each	a trace
Iron sesquioxide	0.10
Alumina	0.45
Silica	1.87
Organic matter	0.70
	8.41

It also contains free carbonic acid. The springs may be classed as indifferent thermals, resembling in composition those of Schlangenbad, Töplitz, Gastein, Wildbad, Chaudefontaine and Pfeffers, and also, but not so closely, Bath, in England, and

Baden Baden, in Germany, the latter containing a greater proportion of mineral.

The spring which supplies the hospital has an estimated flow of 30,000 gallons in twenty-four hours. The water is forced by a steam pump into reservoirs at a height of 150 feet, where it is allowed to cool before being used, and distributed to the bath house and hospital buildings.

Dr. Bertram B. Boltwood, of New Haven, Conn., under authority of the secretary of the interior to examine the waters of Hot Springs, reported that the waters of the springs on the

or other radioactive solids, and that the tufa deposited by the springs does not contain appreciable traces of radium. (See report of superintendent, Hot Springs Reservation, in the Annual Report of the Interior Department, 1905, page 737.)



Fig. 1.



Fig. 2.

The central power plant furnishes heat for the entire group of hospital buildings, power for the ice machine, electric lighting and electric power apparatus, laundry, and the pumps fill the reservoirs which supply water to the various baths. The water for drinking and cooking purposes is obtained from the city mains.

The Army Nurse Corps Home, for female nurses, one of the recently completed buildings, is a simple structure conveniently arranged to accommodate one chief nurse and fifteen nurses. The interior is finished white,



Fig. 3.

Hot Springs Reservation are all radioactive to a marked degree, and that the radioactivity of the waters is due to dissolved radium emanation (a gas) and not to the presence of salts of radium



Fig. 4.

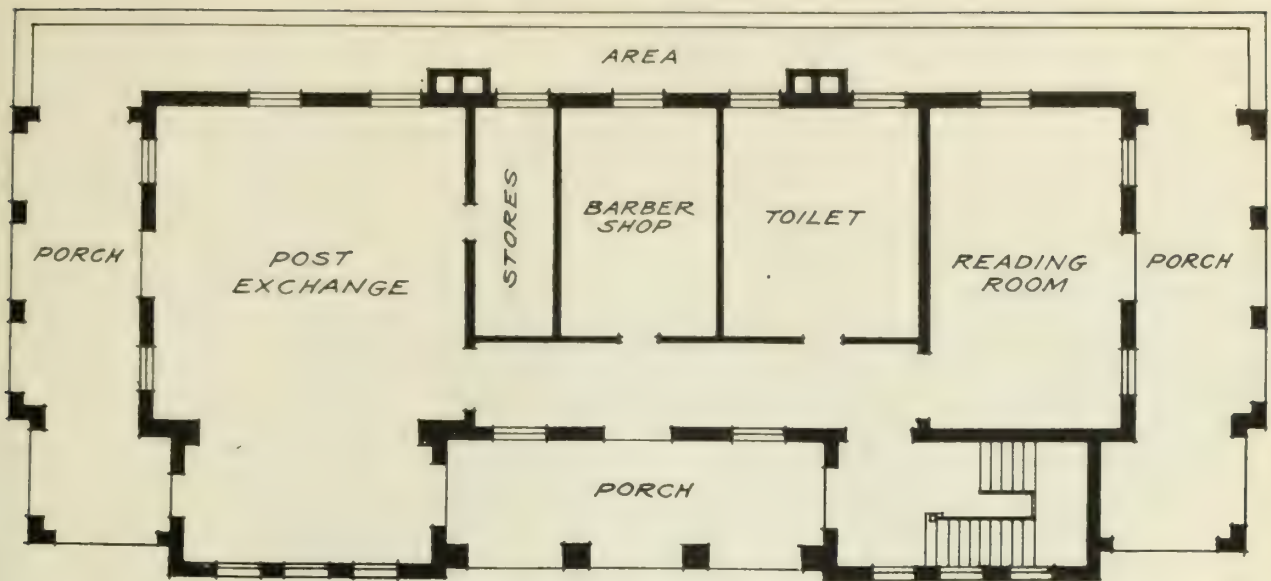


Fig. 5. Army and Navy General Hospital. First floor plan—hospital corps barrack.

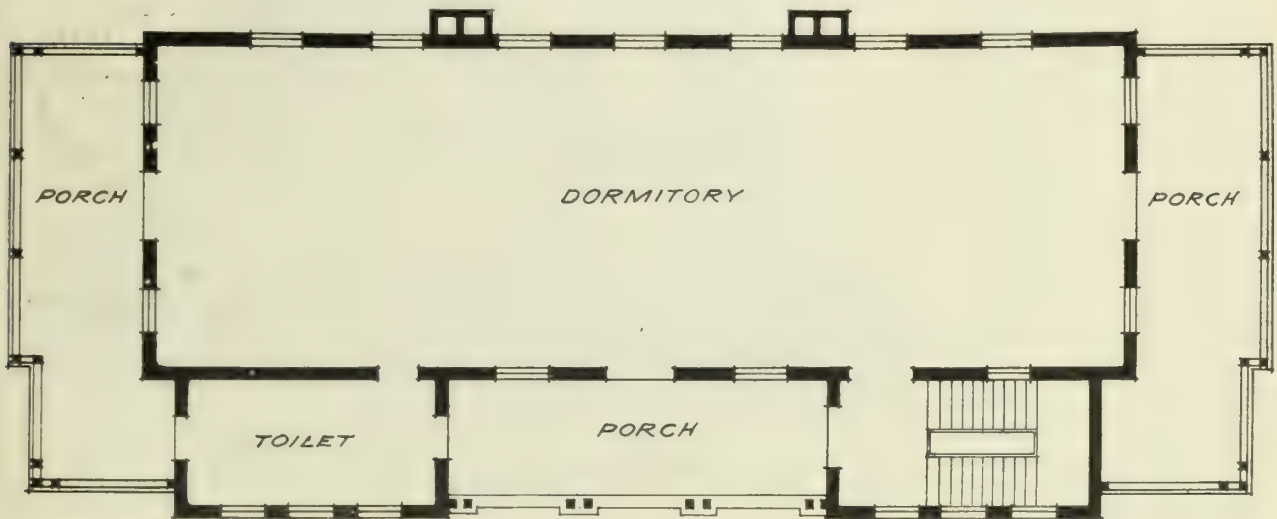
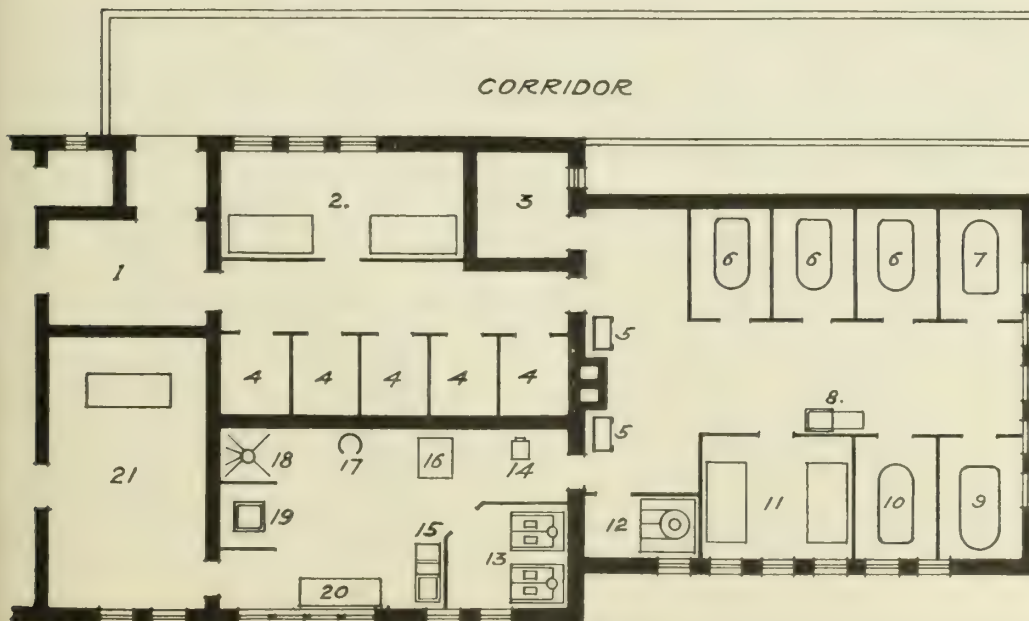


Fig. 6. Army and Navy General Hospital. Second and third floor plan—hospital corps barrack.



1. Entrance hall.
2. Rest room.
3. Toilet.
4. Dressing rooms.
5. Blanket warmers.
6. Regular baths.
7. Nauheim bath.
8. Pack sink.
9. Continuous bath.
10. Electric bath.
11. Pack room.
12. Electric cabinet.
13. Hot air cabinets.
14. Scales.
15. Fomentation sink.
16. Control table.
17. Perineal.
18. Shower.
19. Sitz bath.
20. Shampoo.
21. Massage room.

Fig. 7. Army and Navy General Hospital. Plan of officers' hydrotherapeutic baths.



Fig. 8.

with mahogany stained birch doors and hand rails of staircase. Each nurse is provided with a separate room and ample closet space. The toilets have tile floors and wainscoting and are equipped with modern plumbing fixtures. The plans and the reproduction of the photograph of the building are self-explanatory.

The bath house has been overhauled and new plumbing fixtures installed, and a new addition erected for the officers' hydrotherapeutic baths. This addition is modern in every respect, as a reference to the plan will indicate. The floors throughout are of tile and all the rooms are wainscoted with marble 6 feet 6 inches high; the balance of the walls and ceiling are plastered with hard white cement plaster.

The Hospital Corps Barrack, under construc-

tion, is for the male nurses of the army. When completed, the building will quarter fifty-two privates and six sergeants.

As will be seen in the plans, the first floor is arranged for a post exchange, reading room, barber shop, and toilet containing shower baths and other lavatory conveniences. The post exchange will have for sale candies, tobacco, non-alcoholic drinks, pastries, etc.

The profits of the exchange are used for the soldiers' mess.

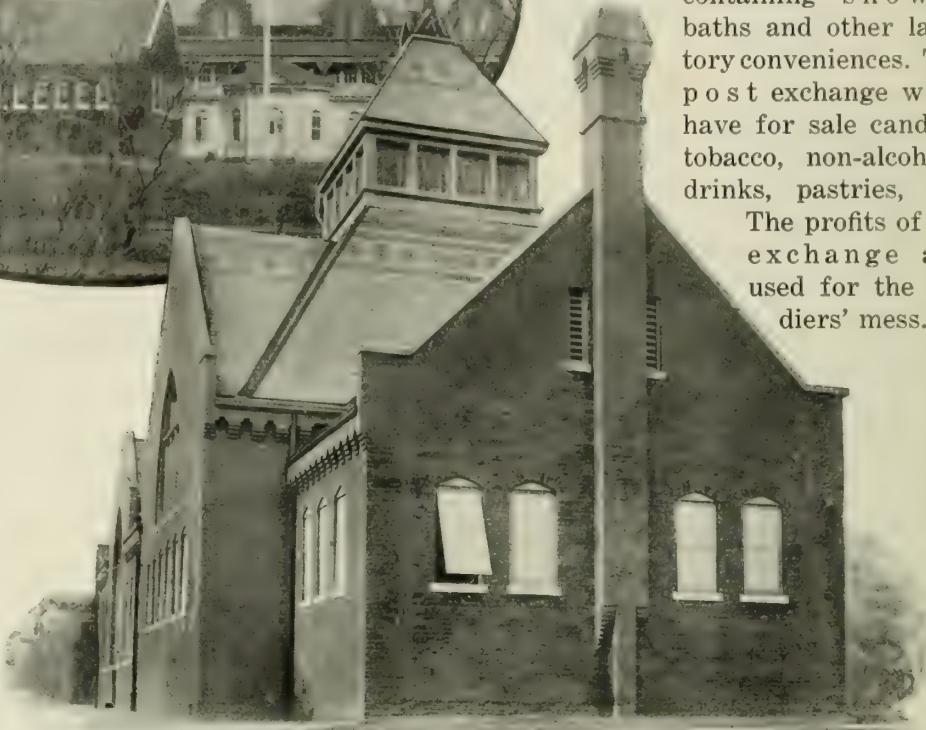


Fig. 9.

Army and Navy General Hospital. Fig. 8—Bath house and ward. Fig. 9—Bath house, south end.

The ward buildings are without any special arrangement, the ceilings are high, porch room ample, arranged so that portions can be closed and used as solariums in winter, and they have protected corridors leading to baths and mess rooms.

Colonel Winter has as his assistants Major Keller and Captains Fife, Culler and Welles, all officers of the Medical Corps, United States Army.

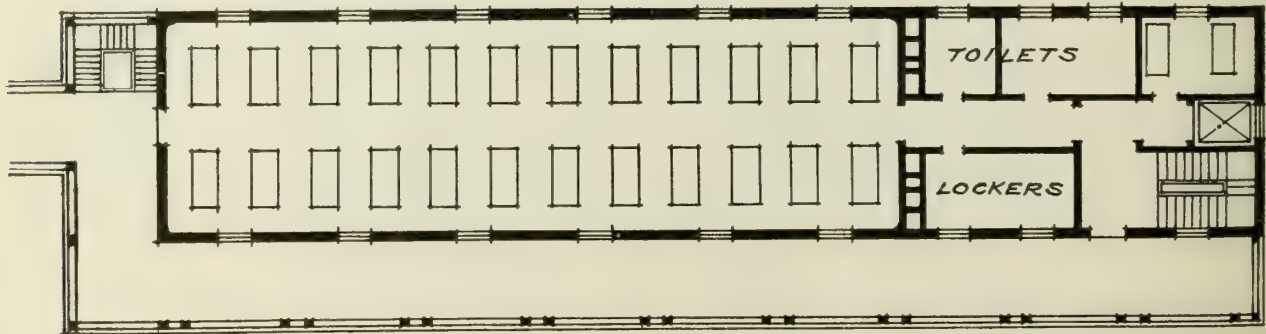


Fig. 10. Army and Navy General Hospital. Typical floor plan—ward.

EDIBLE PASTES—MACARONI, SPAGHETTI, VERMICELLI, NOODLES¹**Inexpensive Sources of Nutritious Foods—Coloring Matters in Bulk Goods—Needed Changes in the Requirements of the Federal Standards
—Precautions in Purchasing**

BY JOHN PHILLIPS STREET, CHEMIST CONNECTICUT AGRICULTURAL EXPERIMENT STATION, NEW HAVEN, CONN.

THE edible pastes made from dough are of the two main classes—those of Italian origin, which include macaroni, spaghetti, vermicelli, etc., the name referring to the shape of the finished product, and those of German origin, noodles, which are generally flat strips of dried dough. The raw materials used in these two quite similar classes of products, however, show important differences. Macaroni, spaghetti, and vermicelli are made of the semolina of wheat rich in gluten (preferably of durum or other hard varieties) and mixed into a dough with water. Noodles, on the other hand, are made with wheat flour and eggs. An inferior variety of noodles, known as “plain” or “water” noodles, is made without egg, and is simply a mixture of wheat flour and water. Occasionally also the manufacturers of the Italian products use egg, which increases the food value of the article, but is by no means an essential constituent of the genuine paste. Another grade of macaroni is made from a mixture of durum semolina and ordinary flour, while the poorest grades are made chiefly from ordinary wheat flour and colored to simulate the true product. There is considerable doubt, however, whether this low-grade article is at all entitled to be called macaroni. Whatever the nature of the raw materials used, the pastes obtained from their admixture are passed mechanically through metal vessels with perforated bottoms and are formed into various shapes and dried.

It is generally conceded that the highest grade of macaroni (and the term is used here generically to include also spaghetti and vermicelli) is made from the semolina of wheat of the durum type, which is grown chiefly in Russia, Algeria, and the drier sections of this country. Such a paste will have a pronounced natural amber yellow color, and will be translucent and with a vitreous fracture. Paste made from the flour of durum wheat instead of from its semolina, and from the harder grades of ordinary wheat, are generally of a grayish-white color. An objection to these flour macaronis is their stickiness when cooked, a serious objection except in dishes like macaroni au gratin, where stickiness is desirable and will be developed by the cheese, regardless of the grade of macaroni used.

In order to compete with the high-grade article, artificial color, vegetable or coal-tar, is often used with the low-grade pastes. It is of interest to note that the American Macaroni and Noodle Manufacturers' Association is on record in favor of the prohibition of all added coloring matter in edible pastes, whether declared on the label or not. No artificial color is necessary in the high-grade product made from the semolina of durum wheat, and its use in the inferior grades is simply to conceal inferiority and for purposes of deception. The Federal authorities have ruled against the use of color both in macaroni and similar pastes and in egg noodles, and this ruling should be of great advantage to the legitimate industry and to the consumer as well. At present we import annually about 100,000,000 pounds of macaroni, largely on account of the superior reputation of the foreign product made from the durum semolina. The use of similar raw material by our own manufacturers and the omission of all artificial coloring would doubtless increase the reputation of the American product and greatly reduce the amount annually imported.

This prohibition of color, of course, would not prevent the manufacture of the inferior product, but the latter would no longer be able to compete unfairly with the high-grade article, and naturally would be sold at a lower price, which is as it should be.

It has been suggested by some that a statement on the label that color had been used would be sufficient protection to the consumer. Such claimants, however, lose sight of the fact that over 60 percent of all the macaroni sold in this country is sold in bulk, and sales conducted in such a way offer great opportunities for deception. Should a consumer attempt to buy this bulk macaroni at the ordinary grocery store, he would find it, as a rule, put up in 22-pound boxes, and the warning words, “artificially colored,” if present, usually skillfully covered up with the blue paper lining of the box, and consequently the label in these circumstances would afford him no protection whatever.

Another much discussed question is the use of eggs in noodles. It appears from the best evidence that noodles as originally made in Germany contained egg, and that, when this important and characteristic ingredient was omitted, the product was called “water” noodles. The amount of egg

¹This is one of a series of papers on Foods, to be followed by articles on the same subject.

and the nature of the egg material used varies with the different manufacturers. The genuine noodles contain from one and one-half to three eggs per pound of flour; in the imitation product the amount may vary from one-quarter to one-half an egg, or no egg is used at all. The eggs employed may be fresh eggs, eggs preserved in lime water, dried eggs, or broken eggs imported from China or elsewhere. The standard adopted by the Joint Committee of Food Definitions and Standards requires that noodles (egg noodles) shall contain "not less than 5 percent by weight of the solids of whole, sound egg exclusive of the shell;" this is equivalent to about one and one-half eggs per pound of flour. Noodles containing less than this amount of egg must be designated as "plain" or "water" noodles.

The use of artificial color in the manufacture of noodles is even more objectionable than in the case of macaroni. The artificial color conceals the absence of egg, and therefore is deceptive as to the quality of the noodles. The use of such color formerly was almost universal even in high-grade brands, in the latter probably because of the unfair competition of the colored product. A review of three inspections of noodles in Connecticut shows clearly the former conditions maintaining in the

the showing would probably not have been quite so favorable.

The importance of these pastes as foods is worthy of careful consideration. Tables I and II give certain typical analyses made in this laboratory of foreign and domestic brands of macaroni, spaghetti, and vermicelli. Although there are individual variations, the average composition of the three products is nearly the same, showing from 13 to 14 percent of protein, from 0.4 to 0.5 percent of fat, and from 72 to 73 percent of carbohydrates, with an average calorific value of 349 calories per 100 grams. Analytical figures show little as to the quality of these three pastes, which

TABLE II. ANALYSES OF SPAGHETTI AND VERMICELLI

Brand	Water	Ash	Protein (Nx 6.25)	Nitrogen- free extract and fiber	Fat	Calories per 100 grams
SPAGHETTI						
Rivals	13.03	0.68	13.37	72.57	0.35	.....
Sceau d'Or	13.06	0.58	13.37	72.60	0.39	.....
Windmill	12.69	0.65	12.81	73.66	0.19	.....
Le Lion	13.00	0.72	12.06	73.62	0.60	.....
Crown	12.68	0.67	12.94	73.40	0.31	.....
Clermont	13.37	0.46	11.94	73.91	0.32	.....
Clerget	13.21	0.66	12.00	73.78	0.35	.....
Average (8)	13.03	0.61	12.70	73.27	0.39	347
Maximum (8)	13.37	0.72	13.37	73.91	0.62	.....
Minimum (8)	12.68	0.46	11.94	72.60	0.19	.....
VERMICELLI						
La Flora	11.48	0.83	12.94	74.33	0.42	.....
Scaramelli	11.98	0.70	13.94	73.01	0.37	.....
Margerie	12.11	0.72	14.12	72.72	0.33	.....
La Bella	12.23	0.69	12.81	73.95	0.32	.....
Laroze	12.07	0.97	14.56	71.97	0.43	.....
Monarch (Austin, Nichols & Co.)	12.70	0.53	13.19	73.11	0.47	.....
Columbia (Columbia Mfg. Co.)	12.22	0.72	12.75	73.82	0.49	.....
Average (10)	12.23	0.71	13.58	73.07	0.41	350
Maximum (10)	12.73	0.97	15.31	74.32	0.63	.....
Minimum (10)	11.48	0.48	12.06	71.52	0.31	.....

TABLE I. ANALYSES OF MACARONI

Brand	Water	Ash	Protein (Nx 6.25)	Nitrogen- free extract and fiber	Fat	Calories per 100 grams
FOREIGN BRANDS						
Sceau d'Or	12.71	0.47	12.37	74.11	0.34	.....
Rodier	10.34	0.64	13.00	75.60	0.42	.....
La Armor	12.65	0.64	13.19	72.81	0.71	.....
Crown	12.33	0.67	14.12	72.26	0.62	.....
Margerie	12.61	0.69	12.69	73.71	0.30	.....
Calvé	13.14	0.93	12.69	72.98	0.26	.....
La Bella	13.53	0.66	12.87	72.65	0.29	.....
Chevalier	13.17	0.50	12.62	73.19	0.52	.....
Marin	12.24	0.75	13.44	73.30	0.27	.....
L'Aquila	12.64	0.95	13.12	72.57	0.72	.....
Scaramelli	12.94	0.61	13.00	73.07	0.38	.....
Campagna Italiana	12.88	0.75	13.12	72.48	0.77	.....
Sounette	11.78	0.87	14.00	72.97	0.38	.....
Rivals and Audebert	12.80	0.65	12.50	73.78	0.27	.....
Cordon Rouge	12.48	0.85	14.62	71.75	0.30	.....
Camina	12.38	0.72	15.44	70.37	1.09	.....
DOMESTIC BRANDS						
Castle	11.95	0.66	13.87	73.27	0.25	.....
Marvelli	13.40	0.46	20.69	64.82	0.63	.....
Climax (Pfaffmann)	12.33	0.49	14.12	72.57	0.49	.....
Gold Medal	13.29	0.79	13.69	71.63	0.60	.....
Flag (Mueller)	12.29	0.89	12.75	73.58	0.49	.....
Club (Warner-Hotaling Co.)	12.85	0.50	14.69	71.57	0.39	.....
Average (37)	12.71	0.67	14.00	72.15	0.47	349
Maximum (37)	14.32	0.96	20.69	75.60	1.11	.....
Minimum (37)	10.34	0.38	11.94	64.82	0.15	.....

market and the great improvement in recent years. In 1901 four of twenty-eight samples contained egg and twenty-two were artificially colored; in 1904 five of twenty-two samples contained egg and all were artificially colored; in 1915 eight of ten samples (in package form) contained egg and none was colored. In the latter inspection bulk goods were not examined; if they had been examined,

depends more on the color, texture, and flavor than actual composition; for instance, a high protein content, instead of indicating quality, may be due to the use of an inferior wheat—that is, one inferior from the macaroni standpoint.

A good illustration of the nutritive value of macaroni is given by the well-known preparation, baked macaroni—macaroni au gratin. A familiar recipe for this delectable dish is 4 ounces of macaroni, 4 ounces of cheese, 0.25 pint of cream, and 1 ounce of butter. Such a mixture would contain 1.7 ounces of protein, 3 ounces of fat, and 3.2 ounces of carbohydrates, and would yield 1,321 calories, or nearly half the daily requirement, at a cost of about 14 cents.

In the case of noodles the situation is different. Here analytical data are very informative, and a high fat and lecithin phosphoric acid content are quite certain indications of the use of egg; as a rule, these values increasing in proportion to the amount of egg used. Table III shows analyses of typical brands. It will be noted that the average fat in the egg noodles is 2.39 and in the water

noodles is 0.54 percent, while the lecithin phosphoric acid content of the former is twice that found in the water noodles. The latter shows the same calorific value as macaroni, while where eggs are used this increases twelve points. The extremely high ash figures shown by two of the brands is due to the presence of nearly 2 percent of common salt.

Certain brands of these edible pastes have been exploited for the feeding of the diabetic. The analyses of nine of these are given in Table IV.

TABLE III. ANALYSES OF NOODLES

Brand	Water	Ash	Protein (Nx 6.25)	Nitrogen- free extract and fiber	Fat	Lecithin phosphoric acid	Calories per 100 grams
Golden Seal (Anger)	12.81	0.72	14.69	70.08	1.70	.....	.....
Golden Seal (Anger)	12.91	0.57	15.31	69.62	1.59	0.040	.....
Golden Seal (Anger)	12.72	0.61	13.25	71.79	1.63	0.035	.....
Babyhead (Anger)	10.58	0.71	15.81	70.76	2.14	0.031	.....
Fine (Bremen Mfg. Co.)	13.39	0.54	13.19	72.45	0.43	.....	.....
Wide (Bremen Mfg. Co.)	12.61	0.58	12.19	74.21	0.41	.....	.....
Climax (Pfaffmann)	12.53	0.86	13.62	72.43	0.36	.....	.....
Exquisite (Philadelphia Noodle Co.)	13.14	3.15	16.69	61.32	5.70	.....	.....
Fine (Mueller)	12.75	0.88	12.69	73.34	0.34	.....	.....
Fine (Mueller)	10.56	1.02	14.00	71.61	2.81	0.047	.....
White Leghorn (Mueller)	12.32	0.98	14.75	70.13	1.82	.....	.....
White Leghorn (Mueller)	12.36	0.90	15.62	69.11	2.01	0.050	.....
White Leghorn (Mueller)	12.84	0.87	15.75	68.51	2.03	0.046	.....
Golden Egg (French Deliv. Co.)	12.94	2.65	13.12	70.53	0.76	.....	.....
Excelsior (De Forth)	13.15	0.55	13.62	72.27	0.41	.....	.....
White Rose (Seeman)	12.89	0.58	14.25	69.58	2.70	.....	.....
Monarch (Austin, Nichols & Co.)	12.65	0.50	14.06	72.50	0.29	.....	.....
Republic (Austin, Nichols & Co.)	10.86	2.07	12.94	72.20	1.93	0.035	.....
Maas	12.66	0.66	15.19	70.47	1.02	0.028	.....
Gold Medal (Maas)	8.46	1.00	14.19	73.31	3.04	0.062	.....
Regensburger	13.59	0.63	14.00	70.10	1.68	0.031	.....
Golden Egg (Cleveland Macaroni Co.)	7.76	2.50	14.19	73.36	2.19	0.045	.....
Medium Egg (Freihofer)	10.54	0.67	12.88	74.02	1.89	0.037	.....
Fine Egg (Goodman)	10.85	1.69	15.00	68.88	3.58	0.056	.....
Warner's (Warner-Hotal- ing Co.)	8.36	0.80	13.88	75.94	1.02	0.024	.....
A. & P. Egg (Great Atl. & Pac. Tea Co.)	10.57	2.16	13.00	71.45	2.88	0.036	.....
Mohican	10.98	0.65	14.56	72.30	1.51	0.031	.....
Average, egg noodles (18)	11.63	1.19	14.45	70.34	2.39	0.042	361
Average, wafer noodles (44)	12.55	0.85	13.30	72.76	0.54	0.021	349
Maximum, all (62)	13.84	3.15	16.69	75.94	5.70	0.062	.....
Minimum, all (62)	7.76	0.43	12.12	61.32	0.22	0.013	.....

The Brusson, Dieto, and Jireh brands have nothing to commend them as special foods for the diabetic, their carbohydrate and starch content being actually somewhat higher than the ordinary

TABLE IV. ANALYSES OF "DIABETIC" MACARONI, NOODLES, AND VERMICELLI

Brand	Water	Ash	Protein (Nx 6.25)	Nitrogen- free extract and fiber	Fat	Starch	Calories per 100 grams
MACARONI							
Hoyt's Gum Gluten ..	10.34	0.74	41.37	46.57	0.98	46.22	360
Brusson	8.57	0.68	13.94	76.38	0.43	69.21	364
Jireh	8.80	1.10	16.90	72.30	0.90	58.80	361
Dieto Whole Wheat ..	9.81	0.90	13.88	74.27	1.14	58.72	361
NOODLES							
Brusson	8.67	0.65	14.38	75.77	0.53	68.90	365
Loeb's Home Made ..	9.80	1.00	41.80	41.90	5.50	36.70	384
Hoyt's Gum Gluten ..	8.26	1.13	36.56	51.69	2.36	42.03	374
Hoyt's Gum Gluten ..	8.21	0.65	40.50	49.41	1.23	41.82	369
VERMICELLI							
Brusson	7.96	0.80	18.44	72.37	0.43	65.79	367

unexploited brands. The Hoyt and Loeb preparations, on the other hand, show a carbohydrate reduction of from 40 to 50 percent and are not without merit for the purposes claimed.

PURCHASING TEXTILES FOR HOSPITALS

Character of Raw Goods, Weave, Count, Weight, and Dyes or Bleaches Are Important

The buyer of institution supplies, to be efficient, must be informed on such varied lines of merchandise that it requires constant attention to keep abreast of the times and secure the best for the least outlay of funds—to buy at the proper time, in adequate quantities, etc.

In the textile field alone there are such diversified fabrics and so many different kinds of each class that, unless a buyer is informed as to the fastness of colors, texture, weight, and general construction of dry goods, the institution for which the purchasing is done will fall far short of getting full value for money spent along these lines, and the outlay for textiles alone by institutions in the United States is estimated at about \$5,000,000 yearly.

At this time, when the prices of dyestuffs and raw cotton are abnormally high, there is a strong tendency on the part of some manufacturers to save here and there, and, while the best grades of fabric may be a few cents higher in cost, it will be found well worth the difference to stick fast to brands of well-known merit, and this applies in normal times as well.

A well-known cotton goods house, operating for almost a century, has given assurance that all its fabrics bought under their established brands will be fully up to pre-war quality, and that wherever it may be necessary to lower the standard of color in any fabric, the goods so made will be marketed under a different name. This house, realizing the value of a little technical knowledge on the part of purchasers, has issued "A Few A B C's" for buyers of fabrics well worth studying, and herewith given:

"The best fabrics for institution use are those that give the greatest satisfaction and wear longest. The construction, the weight, the colors or the bleach, and the grade of cotton used are the important factors to be considered. All cotton fabrics are made by interlacing two sets of threads or yarn—one set of threads running lengthwise in the piece, and the other crosswise back and forth across the piece. The method of interlacing these two sets of threads determines the 'weave' of the fabric.

"There is a variety of weaves, but, ordinarily, cotton fabrics are either plain weave or drill weave. A plain weave is one in which the threads interlace regularly, one by one, and give a flat, even appearance. A drill or twill weave is one in which the threads running one way, usually lengthwise, regularly skip a number of threads in such a way that the cloth, when finished, has the appearance of the threads running diagonally through it, although they actually run only lengthwise and crosswise at right angles. Almost all sheetings and ginghams are plain weave. Drill or twill-woven goods are usually the heavier grades, with the exception of cotton ducks, which are known as 'duck weave,' a weave quite similar to the plain.

"The 'count' of goods represents the number of threads running each way in one square inch—thus 64x64, 68x72, 80x84, etc., represent the number of threads per inch running each way. The 'weight' is usually spoken of decimally, as 'two fifty' (2.50), meaning that 2.50 or 2½ yards weigh 1 pound, 2.75 means 2¾ yards to the pound, etc. Goods that weigh three yards to the pound are sometimes spoken of as 3-yard goods. Two-yard goods (2.50) are known as 9-ounce, 10-ounce, etc., meaning that these goods weigh so many ounces per linear yard.

"The dyes or bleaches and the grades of cotton used can be determined only by the service the goods give in use. The better the quality of these essentials, the longer the fabric will stand the wear and tear given it."

PLANS FOR A COUNTY TUBERCULOSIS HOSPITAL¹

Designer Urges That Advanced Cases Cannot Be Cared For in Shacks, and Incipient Cases Can Go Into a Block Hospital—Proposed Institution to Be Part of General Hospital

By WALTER H. WATTERSON, M. D., HEAD PHYSICIAN, AND L. F. SUTTON, M. D., OF THE STAFF, COOK COUNTY TUBERCULOSIS HOSPITAL, OAK FOREST, ILL.

LAW imposes on the county the duty of providing care and treatment for the tuberculous in thirteen states—namely, New York, New Jersey, Washington, Texas, Ohio, Wisconsin, Minnesota, Indiana, Missouri, Iowa, Michigan, Kentucky, and Illinois, the last nine states members of this conference. Illinois alone has eight or more counties now contemplating the erection of institutions for the care and treatment of the tuberculous, and other states are doing as much or more.

Unless we, as medical men, propose the proper construction of these institutions, we fail to grasp an opportunity to do the tuberculosis movement the greatest service—a service expected of us. A careful study of the problems, with visits to all the principal tuberculosis sanatoriums in the East,

Then let us first know what we are building the sanatoriums for.

The objects are to solve the prophylactic, therapeutic, and social problems of tuberculosis. The difficulty of convincing the incipient case that he has the disease and the stigma of entering a tuberculosis institution with its unavoidable institutional atmosphere leave the class of patients for whom the county institutions are built as principally advanced cases. The occasional incipient case can easily be placed in the hospital, but the advanced cannot be efficiently cared for in the cottage without the imposition of much more expense to the public than the same hospital care would impose. The hospital permits of temporary occupancy by employees, or enlargement to meet

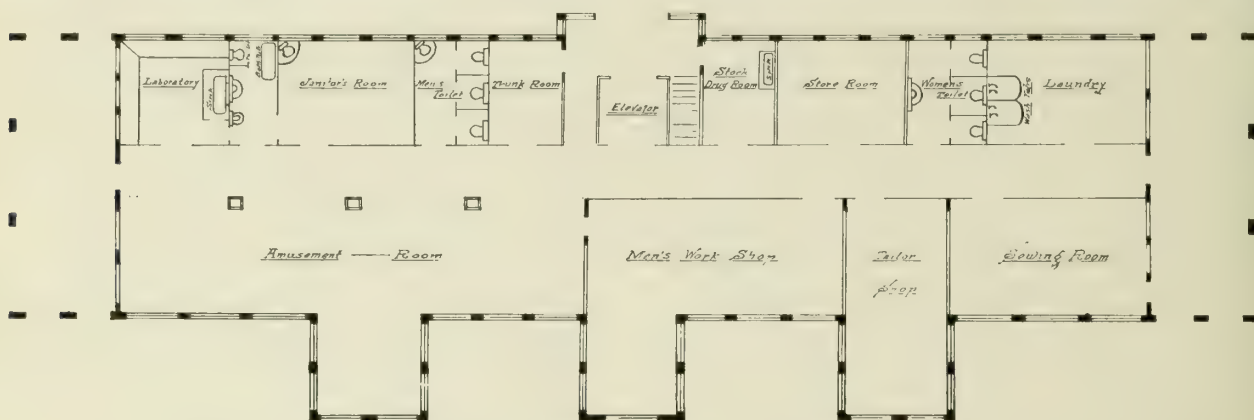


Fig. 1. Proposed Plan of a County Tuberculosis Hospital. Capacity, 40 beds. Basement floor plan, on level with ground.

where past mistakes have been dear lessons, has convinced us that the hospital unit, not the cottage nor the "lean-to," is the appropriate construction for the country's care of these cases.

Our argument for this construction is short, but we are sure it is convincing; at least to those who will make some study of the situation.

Some may think they are to cure their patients in these institutions, but such impressions are not borne out by facts, which show that, at best, but 5 percent to 10 percent are cured in sanatoriums now in operation. The overenthusiastic, who, in their efforts to induce their community to build sanatoriums, give extravagant promises, will later have to meet embarrassing inquiries.

future demands without detracting from the efficiency of the initial structure.

The first cost of a hospital may be more than the cottage system, but the ultimate usefulness and economy of administration is not long in making up this excess of initial cost. Considering all this, and believing that the county's principal duty is to care for the advanced tuberculous until they regain their strength, for those with acute and subacute exacerbation during the long chronic course of phthisis, for those who need the discipline of an institution, those without homes, those without will-power, and for the advanced cases, or those who cannot properly arrange their treatment at home for, at least, certain months in the year. We propose the accompanying plans of construction, objection to which, should there be any, we will gladly discuss with you.

¹Paper read and plans shown before the Mississippi Valley Conference on Tuberculosis, Louisville, Ky., October 4, 1916.

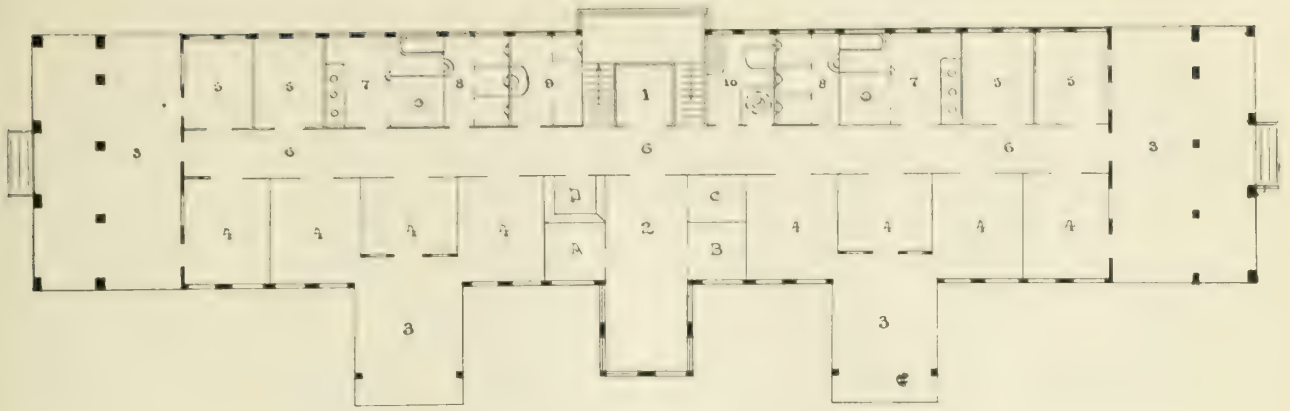


Fig. 2. Proposed Plan of a County Tuberculosis Hospital. First floor plan.

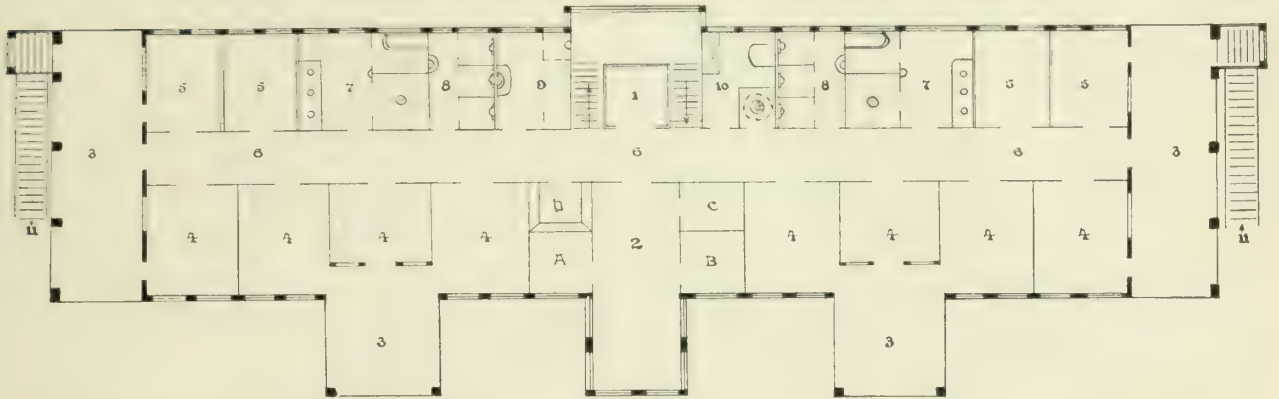


Fig. 3. Proposed Plan of a County Tuberculosis Hospital. Second floor plan—same as first floor plan.

- | | | | |
|-----------------------------|--|-------------------------------------|---------------------------------|
| 1. Elevator. | 5. Single rooms. | 8. Patients' toilet room. | A. Medicine room. |
| 2. Nurses' room and office. | 6. Corridor. | 9. Nurses' toilet and wash room. | B. Head nurse's coat room. |
| 3. Porches. | 7. Wash and bath room (shower, needle, and tub). | 10. Utility room, with incinerator. | C. Attendant nurses' coat room. |
| 4. Two-bed rooms. | | 11. Swinging fire escape. | D. Linen room. |

WHAT DISPENSARY WORK SHOULD STAND FOR¹

The Reasons For Good Service—Heading Off Incipient Disease—Preventive Work—Care of Chronics—Teaching the Public Self-Care—Medical Education and Social Service

BY RICHARD C. CABOT, M. D., BOSTON

FOR the most extensive medical service at the least cost.

2. For preventive and educational work in the incipient stages of disease.

3. For education and guidance in chronic disease.

4. For medical organizations: (a) through cooperation of physicians expert in different fields of medicine; (b) through cooperation of physicians with social workers, psychologists, technicians, and assistants of various grades.

5. For medical education, graduate or undergraduate, and for the education of all types of non-medical assistants.

6. For a continuous public object-lesson on the advantages of group medicine and the limitations of private practice.

Examining this platform plank by plank, I think it is demonstrable *that the largest and cheapest output* of satisfactory medical work is secured in a *good* dispensary, while the largest and cheapest output of medical fakes issues from a *bad* dispensary.

The contrast here is both with hospital ward service and with private practice. In ward service a given expenditure of money and time serves relatively few people. The usual assumption is that ward cases are more important than dispensary cases because more serious. But this traditional dogma may well be doubted. Many ward cases (involving the nose and throat or the female pelvis) are not serious unless an enterprising surgeon makes them so. Others are undeniably more serious than ambulatory cases, but the service given them is so slight and temporary that its importance is limited. Nephritis, chlorosis, and

¹Read at the eighteenth annual conference of the American Hospital Association, Philadelphia, September 26-29, 1916.

arteriosclerosis exemplify this class. We may succeed in patching them up for a short time, but that is all; and such patients are often disappointed with the meager benefits at considerable cost. On the other hand, no one can deny the public and private importance of syphilis, gonorrhea, tuberculosis, diabetes, goiter, children's digestive disturbance, and many other diseases which are best treated in the dispensary during most of their course.

It seems to me clear that anyone who has money to spend for medical service can do more good with it by starting a dispensary than by building a hospital. Of course, we need both; but if the choice must be made, and the public good is our only object, the dispensary seems to me preferable. Some further reasons for the preference are given below.

Preventive work is admittedly one of the most important pieces of medical service. Obviously it is to be done in the incipient stages of disease, or earlier still. This means that preventive medicine is concerned largely with ambulatory patients and their families—in other words, with persons best treated in a dispensary.

To teach the tuberculous how to live, to examine and warn the members of their families, is now a settled requirement in good dispensary clinics. But this applies just as forcibly to syphilis and gonorrheas. They, too, must be treated and taught in family groups, through which, as through the well-drilled victims of tuberculosis, the general public can learn the truths of preventive medicine and the lies of the quack. The instruction of mothers in baby feeding, or workmen in industrial disease, and of the neurasthenics in self-control send waves of medical enlightenment spreading through the community. Object lessons, harangues, and printed instructions may in this way propagate a dispensary's influence through a city or through a state. Class methods are useful and time-saving, but need not be here described.

Chronic diseases, such as diabetes, goiter, peptic ulcer, bronchiectasis, arteriosclerosis, and tabes dorsalis, can be materially helped by weekly or monthly supervision in a dispensary. Diabetics can be taught to starve themselves until sugar-free, and to maintain their working power through months and years, if their diet is carefully and frequently supervised in a dispensary clinic. The most intelligent can be taught food values and the principles of the diabetic regimen so that in time they can almost care for themselves. The reeducation of a neurasthenic (chiefly to be accomplished by social workers) will not banish his disease, but may banish his idleness

and make him once more a wage-earner and a consumer of his own smoke.

As an object lesson in the sensible, economic, and honest organization of medical industry, the dispensary is now society's most powerful weapon against the evils and anachronisms of private practice. By private practice I mean here the attempts of the individual physician to diagnose and to treat single-handed a clientele which no living man is wise enough and skillful enough to treat satisfactorily. Without the aid of x-ray, Wassermann, or cystoscope, a large number of men are now trying to diagnose and to treat headaches, joint pains, and bellyaches, which only a group of cooperating experts can understand.

The private practitioner is often a broader, cleverer, more resourceful man than the more specially trained member of a diagnostic group. But the unaided private practitioner cannot often do better work than the whole group functioning as a unit. He cannot be at once a radiologist, an internist, and a laboratory technician—far less an internist and a skillful operator on all parts of the body, as any so-called "physician and surgeon" must try to be.

In the dispensary men learn to work together in groups and become expert through constant practice within a limited field. Working in groups means something more than sitting in adjacent rooms. It means knowing when to call in another man and when not to occupy him unnecessarily. It means the ability to teach and to learn within the group, so that it becomes constantly better knit—a faster as well as a more accurate team. A dispensary physician who does not use his associates as consultants frequently and skillfully is not fit for the job.

But medical organization in a dispensary means not only the team-work of peers. It means the stratification and sifting out of jobs, so that a physician never need spend much time on work which a less highly trained person can do.

(a) Routine laboratory work, temperatures, weights, hemoglobins, bandaging, simple dressings, blood pressures, and part of the written history can best be done by trained and paid assistants or by medical students.

(b) Follow-up letters, transfer of patients from one department to another, daily statistics, and other details in the smooth running of a clinic should be in the hands of a permanent clinic secretary.

(c) Investigation of home conditions, of work places of the psychic, and emotional factors in disease and of the financial obstacles hindering the patient's recovery should be assigned to the social worker; not as a permanent depository of all

responsibility for the patient, but as an assistant and consultant for the physician.

Such a division of labor among persons of different degrees and kinds of training is essential to good medical work, yet is almost unknown in private practice. The dispensary should develop and uphold good standards of organization and stratification in medical industry.

Education not only of the public, but of future doctors, social workers, and technicians should be carried on in dispensaries as well as in hospital wards, or better. I recognize that for medical students the example of the worse grades of dispensary work may be disastrous. To see a roomful of patients "run off" so rapidly as to insure slovenly diagnosis and quackish treatment is to tear down instead of building up the student's capacity. On the other hand, good dispensary work furnishes first-rate training in diagnosis, in the guidance of patients, and in the knack of "getting at" all sorts and ages of both sexes—under conditions less abnormal than those of a hospital ward.

Through a strange twist of fortune, the dispensary, started as an humble agency for distributing or "dispensing" drugs to those prevented by poverty from getting any better medical care, has come to be the best public demonstration of how medical work should always be done, the best exemplar of medical forces organized for accurate and thorough service.

Private groups of physicians, organized into partnership so as to insure competence in all the mutually dependent divisions of medical skill, inevitably take the form of a nest of offices arranged around a common waiting room, with common records and a common fee. This is simply a small dispensary in all but name. Indeed, the huge diagnostic machine of the Mayo clinic is nothing but an up-to-date dispensary, with fees somewhat higher than those of other dispensaries.

SUMMARY

To sum up, what, then, should dispensary work stand for? For all that is best in modern medical practice.

THE LIGHTING OF HOSPITALS IN GREAT BRITAIN

Gas Coming Back as the Choice of Illuminants—Relative Merits of Electricity and Gas—Operating Theaters Still Use Electricity—Illumination of Country Hospitals

By SYDNEY F. WALKER, BATH, ENGLAND

FOR hospitals in all towns where there is an electricity generating station the electric incandescent lamp has been almost universally employed for a long time past, but during recent years there has been a tendency to return to gas. In the early days of the incandescent electric lamp there was a very strong feeling in its favor among hospital authorities, as well as among the general public, on account of the admitted advantage it possesses that no oxygen is taken from the atmosphere. Although in those days the cost of lighting by electricity was so very much greater than by gas, its supposed advantages were so great that the extra cost was more than counterbalanced. The introduction of the electric light into hospitals took place at about the same time that the vigorous campaign against lodgments for bacilli commenced. It was part of the regeneration of hospitals that was then going on. In addition to this, gas at that time had a very bad name. Gas companies had ridden very roughly over the public generally, and the electric light had been welcomed as a savior, whose cost did not matter. Since then, however, there has been a considerable revulsion of feeling in the matter. Gas engineers have put their houses in order, and have

greatly improved the quality of their light and lessened its cost, the latter having steadily decreased. The advent of the welsbach mantle and its subsequent improvement have gradually brought gas more and more into competition with the electric light in the matter of quality. The welsbach mantle was itself by no means perfect when it was first introduced; the upright form cast heavy shadows and blackened ceilings, and no modern hospital would allow that; it also flickered a good deal, so that the effect of reading by its aid was very painful as compared with that of the electric incandescent lamp. The inverted mantle, however, with the arrangement for regulating the supply of air, appears to have completely overcome both troubles; the light does not flicker, and there is very little blackening of ceilings. On the other hand, very strong complaints have been made everywhere about the glare of the incandescent electric lamp, and this is intensified in the metallic filament lamps, which burn at so much higher a temperature than the old carbon filament lamps did. Hospitals have also had to consider more carefully the cost of everything used, and naturally the cost of lighting has come up for review. Although with the metallic fila-

ment lamp the cost is about one-third of that with the carbon filament, still in the great majority of cases, for the same illuminating effect gas is cheaper. Further, the hygienic value of illumination by electric light was seriously called in question a few years ago by several able scientists. The late Professor Vivian Lewes, in particular, made some very careful experiments to determine the point. He and Dr. Rideal both declared that, for the illumination of large areas, where a number of people were assembled, the effect of welsbach mantles was to keep the air at breathing level good, while with the electric incandescent lamp it became distinctly bad. Professor Vivian Lewes made an experiment in a dwelling room of a comparatively small house, the capacity of the room being 2,700 cubic feet. It was illuminated first with two welsbach mantles, each consuming 4 cubic feet of gas per hour and giving a light of 70 candles each. It was afterward illuminated by three 16-candle-power electric lamps. The temperature outside was 61° F. in each case, and the air outside contained three parts of CO₂ per 10,000. After the lights had been burning the same time, the temperature at breathing level with gas was 63° F., while with electricity it was only 61.7° F.; but the CO₂ at breathing level with gas was only 5 parts per 1,000, while with electricity it was 6. The temperature at ceiling level and the CO₂ were very much higher with gas than with electricity. Professor Lewes drew the conclusion from this that, due to the porous nature of ceilings, walls, etc., the vitiated air was carried off very much better by gas illumination than by electric light. Since the above experiments were made, gas has been making headway against electricity in hospitals. The electric light has not been displaced, as the cost of fitting up with gas would be heavy, but in any extensions that have been made, and in many of the temporary hospitals that have been fitted up to meet the demand created by the war, some form of gas has been employed. In the earlier installations of gas, upright welsbach mantles were employed, but in the later ones the inverted mantles, with the regulating arrangement for air, have been adopted.

Electrical engineers have not been slow to appreciate the troubles mentioned above in connection with electric light, and they have devised new forms of apparatus, which are shown in Figs. 1, 2, and 3. Fig. 4 is a ward lighted by electric lamps on a modified system, and Figs. 2 and 3 show the arrangement of the lamps. In Fig. 1 the complete lamp and fitting that is seen suspended in the middle of the ward is shown, and Figs. 2 and 3 show the component parts of the fitting. As will be seen from Fig. 2, the incandes-

cent lamp is suspended from the ceiling, and the light giving portion is inclosed inside a metal basin containing a silver glass reflector, arranged to direct the rays of light up to the ceiling through the transparent glass cover, the lighting of the ward being accomplished mainly by reflection from the ceiling and walls. In addition, as will be seen from Fig. 4, there is a bracket and lamp be-

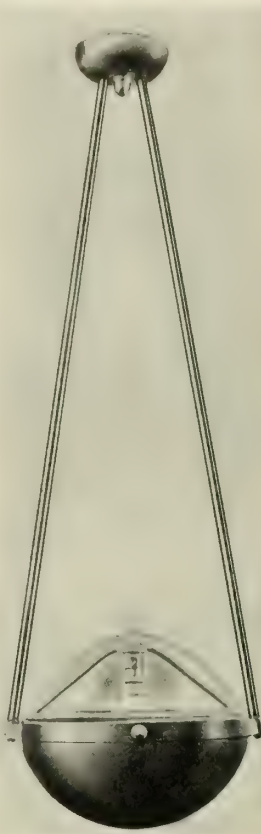


Fig. 1.



Fig. 2.

Modern ward electric light fitting, worked out by the British Thomson-Houston Company, for indirect lighting.

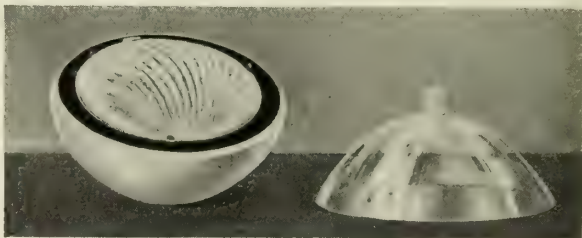


Fig. 3.

Figs. 2 and 3 are parts of the fitting shown in Fig. 1.

tween each two beds, but the lamp is carefully shaded by the special form of shade shown, so that patients in the beds adjoining do not feel the glare and patients in the beds opposite cannot see the lamps. These arrangements for preventing the glare, though they produce very satisfactory illumination, absorb a considerable proportion of the light, so that, if a certain standard of lighting is assumed, the cost will be increased in propor-

tion to the absorption. The same thing will, of course, rule with gas, but it is claimed that the light rays, being spread over a larger surface, are not as dazzling as those emitted from the fine

tric incandescent lamp, lessening of the light also commences from the moment the lamp is put into service, partly owing to the lessening of the sectional area of the filament and partly to the blackening of the bulb, due to its bombardment by minute particles of the disintegrating filament.

LIGHTING OF OPERATING THEATRES

The electric light appears still to reign supreme for operating theaters, but the arrangements employed are various. Fig. 5 shows an operating theater in which the indirect method of illumination was adopted. It was carried out by the same firm, an offshoot from an American company, that worked out the lamps shown in Figs. 1, 2, 3, and 4. Twenty-four prismatic glass reflectors, each containing a 40-candle-power lamp, were suspended

together as shown at a height of 10 feet above the operating table. The lamps were inclosed in a water-tight metal casing above, and underneath was fixed a polished, wired plate glass, held by the metal casing, the plate glass being just on a level with the ceiling. The illumination of



Fig. 4. Ward of a hospital lighted principally by the fittings shown in Figs. 1, 2, 3.

wires of the electric light filament. Gas engineers have, however, been working at the problem of softening the light, just as electrical engineers have, and apparently they have a more difficult task. Numerous frosted globes and other arrangements have been introduced in connection with the inverted welsbach mantle, but there is continual trouble from the globes cracking unless the mantels are frequently inspected, and renewed. If, as frequently happens, a hole is burnt in a mantle, the flame from the burner inside passes through the hole and quickly breaks the globe. Falling glass, at the high temperature which the globe attains often before breaking, is a danger anywhere, and particularly in hospital wards. In the London hospitals, in the extensions that have been lighted by gas, no trouble from this cause appears to have arisen, which is due to the care with which the inspection has been done. For some time back the gas companies and the gas departments of towns have kept a staff of trained men going over all the incandescent mantles every week. The trained eye soon learns when a mantle is going to fail before the next visit, and it is replaced. In addition to the prevention of accidents, the inspection maintains the light given at a very high figure, where without inspection it steadily decreases, partly owing to the collection of dust in the burner, partly to the deterioration of the mantle, and perhaps most of all to the blackening of the globes. With the elec-



Fig. 5. Operating theater lighted by a cluster of lamps, in special fittings, above the operating table, worked out by the British Thomson-Houston Company.

the operating table is stated to have been equal to 30 foot-candles, while the ward illumination shown in Fig. 4 was 1.75 foot-candles. Other apparatus employed for the operating theater consists of pendant groups of lamps, arranged to be placed in any position the surgeon requires at any moment.

For lighting the wards at night, gas engineers have arranged a special shaded fitting, with an upright mantle inside the shade, light being given mainly underneath the lamp. Electrical engineers have arranged a reversible fitting. The incandescent lamp is held under a reflector shade that can be turned so that the lamp throws its light upward at night.

LIGHTING OF COUNTRY HOSPITALS

For country hospitals there is keen competition between the electric light, generated on the ground by a small plant similar to those used in country houses; acetylene gas, also made on the ground by the usual water and carbide of calcium apparatus; gasoline air gas, made on the ground; and what may be termed kerosene vapor. All of them require attendance, and the attendant should be one who thoroughly understands the working of the apparatus. By act of Parliament, acetylene apparatus has to be located in an outbuilding, quite clear of the main building, as there is danger from the gas. Acetylene gas is used for heating and cooking as well as for lighting. Gasoline air gas is claimed to be less dangerous than ordinary gas; it is made by vaporizing gasoline and mixing it with a certain quantity of air, so that on being lighted it does not require air from outside. The danger of gasoline is at the generator—the possibility of the vapor leaking out, meeting some substance that will ignite it, and firing back. In the kerosene systems the oil is vaporized in the lamp itself that is burning it without a wick, and is forced through the mantle that is employed.

One of the most important xenodochiums of its time was the basilica erected before the gates of Cæsarea, in 370 by Basilus, bishop of Cappadocia. It was considered a greater wonder than the Egyptian pyramids and the Colossus of Rhodes.

The Hôtel Dieu of Lyons was founded in 542 by Childebert I. at the solicitation of Archbishop Sacerdos. This hospital was also called xenodochium and was under the supervision of laymen. It was not turned over to the clergy until six hundred years later (1308).

Miss Rose Walker, superintendent of the El Reno Sanatorium, El Reno, Okla., was reelected president of the Oklahoma Graduate Nurses' Association at the annual meeting held in Muskogee the latter part of October.

NEW YORK SEEKS CLINIC DOCTORS

The New Occupational Clinic Now Covers Almost All Trades and Asks for Medical Officers

In a city such as New York, where so many unique and important undertakings are in order, it is no wonder that some of the most interesting and important of governmental functions are entirely unknown in so far as the average citizen is concerned. As an example, how many of the men walking along Nassau street today know that the health department conducts an occupational clinic at 49 Lafayette street, New York city? Furthermore, just how many would recognize what an occupational clinic means?

The fact that the occupational clinic of the Board of Health is the only one of its kind in the world, except for one at Milan, Italy, is something to militate against the charge of gross ignorance on the part of the New Yorker. Much could be written about the work of this important institution, wherein skilled medical men are patiently studying the many diseases directly attributable to certain occupations, and even more could be written of their daily examinations of hundreds of the 200,000 or more food handlers in the city to insure against the transmission of communicable diseases. Does the man or woman dining at any of the many New York hotels and restaurants know that the man or woman serving him has recently received a clean bill of health from the department of health? And is he aware that the baker who has prepared his bread and the chef who has cooked his food have also received official permission to work at that particular occupation?

The medical men of the city know of this work, and its attractive and unusual fields for research and invaluable experience. As a result, the advertisement by the municipal civil service commission of an examination for clinic physician for part-time service will meet with hearty response and result in keen competition for the several vacant positions. The compensation rates proposed by the board of estimate and apportionment for this position are \$300 to \$600 per annum for not less than six hours per week, or \$900 to \$1,140 per annum for not less than eighteen hours per week.

Aside from the experience and education connected with the work, the clinic physician is fitting himself for a new phase of medical practice—that of industrial corporation service.

WOULD STANDARDIZE HOSPITALS

State Medical Society of New Jersey Appoints Committee to Study the Problem

At a recent meeting of the New Jersey State Medical Society the following resolution was passed:

Resolved, That a committee of seven members, including three state members representing the American Medical Association, be appointed by the president to study the status of the general hospitals located in the state, which study shall aim for the betterment and standardization of these institutions, and that the state committee be authorized to confer with the national or other established committees organized for this purpose, and shall report at the next annual meeting of this society; and should any circumstances arise to make earlier action desirable, this committee shall report to the councilors of this society, and action be taken in accord with the findings of the councilors.

The following members were appointed: John C. McCoy, chairman; W. Blair Stewart, Alexander Marcy, Jr., Gordon K. Dickinson, Emery Marvel, Henry B. Costill, Thomas N. Gray.

CARE OF ALCOHOLICS IN THE MODERN HOSPITAL

Employers, Police, Magistrates, and Social Agencies Must Help if Problem Is to Be Solved—Proper Medical Treatment Applied to the Cause Must Be Given

BY CHARLES B. TOWNS, CHARLES B. TOWNS HOSPITAL, NEW YORK

THE establishing of this hospital for the specific treatment of drug habits and addictions has opened up an entirely new field in hospital work. Its magnitude has enabled me to study at first hand not only in our own country, but in most foreign countries, the treatment and care of the drug and alcoholic patient.

As the result of my experience, I am in a position to take up this subject and discuss it not only on the broadest medical basis, but from a comprehensive sociological standpoint as well. Not being a medical man, and never having had, in any way whatsoever, any connection or any experience with any other medical institution, this distinctively new type of hospital has been extremely interesting to me; it has been interesting, indeed, to observe the evolution which has carried my work to its successful development.

It surprises me to note how little the drug and alcoholic patient is understood by the medical world as a whole. This is no reflection, however, on the medical profession. They have had few means of studying this type of patient from a clinical standpoint; in many cases they have had none at all; and there is nothing in their medical education to give them any knowledge whatsoever of this medical problem. I have never yet been able to overcome the surprises which have come to me in finding that my lack of knowledge of medicine has enabled me to establish so many precedents in connection with this work and in dealing with the various phases of this subject.

The alcoholic is everywhere regarded as a disgrace. No one anywhere believes that any medical—or, indeed, any other—consideration should be shown him. He is not considered as a sick man, or treated as one; and, although he is, in one way or another, an enormous medical and sociological problem, I have been unable to find anyone anywhere who has attempted to get at the cause of his being such, or who fully appreciates the full proportions of this gigantic problem.

It is part of my makeup to get at causes. It has never made any difference to me whether I was breaking a mule on a farm, struggling with some problem in an accounting house, or in a quandary over some difficulty that has arisen in my present work, no matter where I was or what I was doing, I have always wanted to know the whys and wherefores and to get at the causes. This has enabled me in my hospital work to proceed from the

standpoint not only of treating the sick of this class, but of trying as well to avoid the unfavorable consequences that grow out of the lack of proper treatment and care of this type of patient.

I have written and said a great deal on this subject, but from time to time I am going to say a great deal more; and I am going to keep hammering at state and municipal authorities all over this country until I put them all to thinking on this subject. And when they do begin to take up this problem with the seriousness it demands, it will mean that one of the biggest economic wastes that this country has had to deal with is in a fair way to be reduced, for the first time, to a minimum.

It is unfortunate that the medical superintendents of our big hospitals are necessarily so involved with the thousand and one daily details of their work that it is impossible for them to take up a subject of this kind and give it the serious consideration it should have. This problem seems to be looked on as unavoidable, and it seems to be supposed that there is no way of correcting it intelligently. In fact, I find that, almost without a single exception, the general practice has been merely to make a requisition for more room when the ward, or the number of beds, set aside for this type of patient became crowded.

I need not point out that this is not an attempt to treat drug and alcoholic patients, but a merely mechanical way of handling them—merely “tapering off” drug patients or “sobering up” alcoholics. In this connection I would say that the problem involves not only the receiving of this type of patients in the big institutions, but the lack of proper treatment and care of these unfortunates as well after they have been admitted. In one way or another this is felt in many branches of hospital work.

It may surprise some of my readers when I make the statement that there is no more medical intelligence being exercised in hospitals today for the alcoholic—so far as I have been able to learn—than there was one hundred years ago. There is the same lack of classification; there is no definite medical treatment. We find the same conditions existing in the courts of law. The alcoholic is either penalized by a fine, reprimanded, and dismissed with a threat, or disgraced through being subjected to a short term of imprisonment among the lowest types of human beings. There is nothing being done really, either sociologically or

medically, to set up a standard by which this class of patients can be intelligently judged; whereas something constructive ought to be, and can be, and must be, done to put those who are really worth while squarely on their feet and to find employment for them.

When I took up this work in 1901 there was, at that time, a deep-seated belief, not only in the medical world, but among people generally, that if you were to take an alcoholic, put him where he could not get drunk for a reasonable length of time, there would be no excuse, if he lived through this process of deprivation, for this man drinking again; and if he did drink again, he was "no good," and should be treated as a criminal. I cannot begin to tell how strenuously I feel the pathos and the pity, and the ignorance and the stupid blundering inefficiency, of this antiquated way of looking at this problem and of dealing with the alcoholic. To set state and municipal authorities right as to the best ways and means of dealing with the matter is, I feel, one of the most important undertakings my entire work has developed.

When we begin to seek and "show up" the unfavorable conditions that grow out of the lack of intelligent dealing with the alcoholic, the results are seen to be appalling. In this state—that is, in New York—the statistics from the state medical institutions for the care of the insane show that about 65 percent of the commitments have an alcoholic history. Their records show—taking the statements of alcoholics, which, it must be remembered, cannot always be relied on—that about 25 percent have *chronic* alcoholic history. As a matter of fact, the actual percentage is very much greater than that; it is more nearly 35 or 40 percent. This type of patient, once it reaches the insane asylum, is, with few exceptions, practically a life liability to the authorities. We find that there are taken from the alcoholic ward where this type of patient is admitted, and from there distributed in other wards of the general hospital, other complications that have grown out of the lack of definite medical treatment. Such crowded institutions are not getting at causes, as I have stated before, but are simply asking for increased facilities for the more or less permanent housing and boarding of such patients.

In the early part of my work I uncovered some highly interesting facts in connection with the general way of dealing with such cases. I found that the only alcoholic patient who can have delirium tremens is the man who cannot get his customary supply of alcoholic stimulant, or who, by reason of stomachic or other irritation, is unable to retain his alcohol. Again, no alcoholic patient can sleep and have delirium tremens. I

found also that in chronic alcoholism one cannot substitute any other form of stimulant for alcohol and avoid delirium tremens.

This work—sixteen years of it under rigid hospital conditions—has proved that where such cases receive definite medical treatment, where they are scientifically treated, the patient cannot and will not develop delirium tremens. There will be, under such treatment, no unfavorable mental condition to deal with; and it makes no difference how much deterioration, both physical and mental, might have set in from excessive alcoholism, none of these cases could ever be classed as insane, nor be accounted eligible for admission to institutions for the care of insane patients.

To demonstrate the difference between "sobering up" such patients by depriving them of their stimulants, and the advantage of getting definite medical results, I will refer to Bellevue. And in referring to Bellevue, it is not that Bellevue, as regards this type of patient, is any worse than any other institution; but, as it receives and dismisses more patients of this type than any other hospital in the world, and as I happen to have an intimate knowledge of the whole situation there, I can, of course, discuss the matter intelligently.

There is no reason why, with the present facilities Bellevue has for the accommodation of such patients, definite medical treatment should not be carried out after classification. Some practical measure should be taken to avoid turning the alcoholic wards of hospitals, such as this, into boarding houses, where any old habitual drunk can come for board and bed when he knows of no other place to go, and where these "old soaks" are permitted to return just as frequently as they choose. The proper treatment of these cases in such institutions would eliminate any further contributions to the insane asylum, and it would also eliminate the necessity of transferring numbers of such patients to other wards in the same hospital.

The accommodations which are now necessary to house and feed those admitted to such wards would decrease materially, and the hospital would not need nearly so much space for such patients. If some system of identification of such patients were established, and certain legal dispositions be made of recurrent cases, it would be only a short time until the old alcoholic "mossbacks" would be eliminated entirely.

It should be possible for those patients who are recognizedly "worth while" to make application to any state or city hospital for treatment. At least 75 percent of such patients would be restored to usefulness and self-maintaining, earning capacity. As it is, none of them is. Definite treatment

and care would illuminate the whole situation, and its effects would be felt widely elsewhere.

Then, too, there are a great many patients who, because they lack funds, cannot afford to go to private institutions for treatment. As the application of definite medical treatment in such cases would require less than five days to one week, one can see how a goodly number of these patients could be treated within the course of a year in any hospital of—say, to begin with—metropolitan size.

The saddest part of all this to me is that, speaking generally, the very medical men who are in charge of this work are not big enough or broad enough to realize the importance of the definite medical treatment and care of this type of patient. They are traveling along in the same old medical rut they have been following ever since medical history began.

As for practical measures, I suggest this: I would like to see the state authorities unite with the municipal authorities in this matter; they could begin with the employer by trying first to save the man who has a job, but will lose it unless he stops drink; educate the employer as to his responsibility in trying to save such a man. You will find him quick to respond to your effort to help his employee.

Then include the police department, the city magistrate, and all social organizations that have to do with this type of patient. Get them together and show them all by demonstration of the definite medical treatment in your own hospital; say that it is now possible to unpoison these alcoholics, set them free from their physiological craving, and put them in condition to be dealt with sociologically. This work should be carried to a definite conclusion, both medical and sociological. It can be done and it is going to be done, and I am going to do what I can to have it done.

I will be very glad to give any medical findings in detail to the heads of all hospitals who have to do with this type of patient. I would like them to know that I will be only too glad to answer inquiries or correspondence on this subject from time to time, and I want them to feel that they may count on me to help in any and every way possible to solve—and to solve aright—this problem that I have elsewhere called "The Unlimited Problem."

The Bend Surgical Hospital is the name of a new institution soon to be opened at Bend, Ore., by Dr. J. C. Vandeventer and R. L. Edwards. A building containing nine private rooms, two wards, a modern operating room, etc., is about completed.

Mrs. Ella Green Davis, for many years superintendent of the Owensboro City Hospital, Owensboro, Ky., has tendered her resignation to the hospital board.

GREAT MEDICAL CENTER FOR CHICAGO

University of Chicago, Rush Medical School, and Presbyterian Hospital to Be Nucleus for \$10,000,000 Institution

In step with the modern idea of foundations and endowments for philanthropic purposes, the University of Chicago and Rush Medical School have just closed an agreement by which a great medical center is to be built up in Chicago.

While the plans are yet in the making, it is generally understood that there is to be a great medical school built on the Midway as a part of the group of the University of Chicago buildings; the university is to give the scientific part of the education of medical students—viz., the first two years—and the medical school is to finish the course. It is understood that the Presbyterian Hospital is brought into the combination for purposes of internship and clinical training of students, and no doubt the County Hospital and probably several other similar institutions will lend themselves as a part of this great aggregation.

It is understood that one of the chief features of the new medical center is to be a post-graduate school, and the sponsors for the movement hope that in time they may build up the world's greatest medical center in the Middle West of the United States. The Rockefellers and the Rockefeller Foundation are to contribute approximately \$2,000,000, with the understanding that the people of Chicago contribute \$3,000,000 more; of this \$3,000,000, \$700,000 has been raised, and Mr. Julius Rosenwald has given another \$500,000. The sponsors for the movement see approximately \$5,000,000 more that can be added to the endowment, so that within a short time there is no reason to doubt that the new foundation will sum up a magnificent total of \$10,000,000. Such a combination, with such an aggregation of capital, ought to make a most profound impression on medical science.

A movement has been launched at Minneapolis, which, if successful, will result in the erection of a group of hospital buildings for the University of Minnesota Hospital requiring an expenditure of 1,500,000 and tripling the capacity of the institution. The plan is to raise the necessary funds by private subscription. Back of the movement is said to be a desire on the part of the university authorities to attract to the faculty of the Minnesota school men of reputation in medicine, to whom the salaries now paid by the state are no inducement. According to the new plan the proposed new buildings would offer hospital accommodations for private patients of "all-time" professors in the university. The University of Minnesota Hospital now houses about 200 patients.

An organization of negroes in Pittsburg, Pa., has filed application for a charter for an institution to be known as the Livingstone Memorial Hospital. The erection of a building to cost \$150,000 is planned, and the undertaking is said to have support from a number of wealthy white residents of the city. The purpose is to establish a hospital which will be devoted primarily to the treatment and care of negro patients. The plan provides that both the medical and nursing staffs shall be composed of negroes, and includes the creation of a training school for negro nurses.

The hospital reported in these columns last month to be erected at Charleston, S. C., by the South Carolina Medical Society, a local organization, is to take the place of the present Riverside Infirmary, the old quarters of which will be converted into an administration building. The new structure is made possible by a bequest of \$85,000 from Mrs. Thompson, a wealthy resident of Charleston, and will be known as the Joseph Thompson Memorial. It will have a capacity of 42 beds, according to plans now being drawn by Architects Todd, Simons & Todd.



The
MODERN HOSPITAL

Editorial Office . . . 6 North Michigan Ave., Chicago
Business Office . . . Metropolitan Building, St. Louis

EDITORS.

Henry M. Hurd Fidelity Building, Baltimore
Frederic A. Washburn . . Mass. General Hospital, Boston
Winford H. Smith . . . Johns Hopkins Hospital, Baltimore
S. S. Goldwater Mt. Sinai Hospital, New York
W. L. Babcock Grace Hospital, Detroit
John A. Hornsby . . . 6 North Michigan Ave., Chicago

SUBSCRIPTION.

Under domestic postage, \$3.00; foreign postage, \$3.50 (14 Shillings). Single copies 35 cents.
Domestic rates include United States, Cuba, Mexico, Porto Rico, Canal Zone, Hawaii and Philippines.

Contributors, subscribers, and readers will find important information on advertising page 34.

Before and After—The Hospital

Hospital administrators and those who are interested in the welfare and progress of the modern hospital as a social factor are all but unanimously agreed that the care of the sick within the walls of the institution is only one of the modern hospital's problems, and that the hospital should be and is a rallying point in the community about which centers all the health activities of the community.

Perhaps the most important of these activities concern incipient disease and, with a chasm in between, the convalescence of the sick after the hospital days are over.

We are hearing very much these days about the lack of hospital beds, and there is no doubt that, if we are to realize some of the ideals of those who believe that this is a hospital era, very many more hospital beds are to be instituted than we have at present. But it seems to us that a far more important thing than the addition of hospital beds, just at this moment, is the utilization of all the resources at our command to (1) prevent disease, and (2) hurry into renewed health and productivity those who have been the victims of disease.

If the hospital is a social health center and the guiding star of the community in matters concerning the health, then its first duty is to prevent dis-

ease in so far as possible. Of course, the best way to do this is to educate the people concerning their habits of life, sanitation, hygiene, and the like; but this is only possible within very narrow limits, and the next best thing to do is to catch disease in its incipency and to head it off, so that its victims need not be applicants for hospital beds, and that they can remain in their homes and get over their troubles rapidly. The next thing to do is to bring hospital patients to the end of their disease as quickly as possible and back to full health and productivity, and to do it in such a way that they will not again be afflicted with the same disease or with a return of it.

We cannot head off disease in our dispensaries and out-patient departments unless these are far more efficient than they have been in the past. The ambition on the part of dispensary physicians to hurry through as many cases as possible in a given number of minutes or hours leads to inefficient diagnosis and even more inefficient treatment, and this is what has created suspicion in the minds of those who are compelled to go to our dispensaries for lack of money to pay a doctor.

We have got to make better diagnosis of incipient disease in our dispensaries, and we have got to apply far more efficient treatment. Many of us will recall the case or cases in the Massachusetts General Hospital, a year or two ago, in which one after another member of a family of nine people were afflicted with scabies, and, as each one was cured of the trouble, another became infected, and so this went on for a year or more, and at the end of that time the out-patient nurse took the matter in hand and hired an able-bodied scrub woman, went into the home and cleaned up the whole family at one time, and also cleaned and disinfected the premises. During the year's progress of the disease in this family approximately \$128 were expended for dispensary service and visiting nursing. The disease was finally eradicated at an expenditure of approximately \$3. This is perhaps the most illuminating example of what the dispensary was not and what it can be made to be. Hospitals had better think about their dispensary and out-patient service in the light of these suggestions.

Then about convalescence. It costs a good deal of money to keep patients in a hospital in town, with a great amount of nursing for bed patients and with all overhead expenses of running a modern institution. We had better think about getting our sick people out of these expensive hospitals, and into homes of some sort in the country, where they can be maintained at a lower cost and where they will have at hand the auxiliaries of a prompt cure—viz., better air, more sunshine,

fresh vegetables and fruit, and eggs and milk. The hospital that has the money and can afford to organize a country branch had better do so, and that branch should have enough tillable land about it for farming purposes. It could easily happen that a country branch could contribute largely to the supplies of the city institution, and in many cases some of the patients could be impressed for some work on the farm, not only to the advantage of the organization financially, but for their own best good, physically and mentally.

These are not theories; they are practical everyday principles underlying the modern attitude toward the sick and toward the vast and growing expenditures for hospital purposes.

The National Safety Council

A man once met a small lad staggering along the road under the heavy burden of carrying a smaller boy, who was unable to walk. The man said to him, "Is he not too heavy for you to carry?" "Oh, no," said the lad, "he is not heavy; you see, he is my brother."

This story truly illustrates the aims and objects of the National Safety Council. The chief aim of hospitals is to cure the sick and save the lives of the injured. Their second most important function is educational, notably in training the members of the medical and nursing professions and teaching public sanitation. Through the development of hospital social service work and many auxiliary agencies, the hospital is rapidly becoming a leader in preventive medicine. The circle of its influence is radiating wider and wider, and the hospital field is developing points of contact and cooperative agencies innumerable. One of the important coworking agencies is the National Safety Council, whose fifth annual Safety Congress was held in Detroit the week ending October 18. This council stands closer to preventive medicine in a practical way than any other national educational body. When the millennium, for which it aims, is reached, few hospitals will be needed and industrial safety will be an assured fact.

The field of work covered by the council knows no geographical limitations, encompasses all occupations, and reaches every activity of industrial and social life. The program of this congress is so varied and its recommendations so practical in application, that its work has attracted universal attention. The various section meetings covered subjects pertaining to public utilities, mining, iron and steel foundry work, transportation facilities, chemical and dye industries, mines and mining signals, railroad crossings; electrical, textile,

paper, and automobile industries; elevators, cotton mills, logging and lumbering, cement industry, marine and fire hazards; civic and national problems, such as accident prevention, universal danger signs, protection of the eyes in industries, use of alcohol by mechanics, accident statistics, signal systems, compensation and health laws and insurance, first aid service, occupational diseases, factory sanitation, physical examination of employees, prevention of infection, industrial nurse work, industrial welfare work, industrial hospitals and dispensaries, medical and dental work in the industries, industrial hygiene, health hazards, benefit associations, and federal standardization of accident records, safety regulations, and danger signs. The mere mention of these pregnant headings illustrates the universality of the field covered by the congress.

The membership of the council is composed of managers and heads of the great industrial plants and institutions of the country. Much stress during the congress was laid on accident prevention in the various industries and on the use or nonuse of alcohol by industrial workers, which latter subject was heavily featured by the newspapers.

The appointment of a committee at the recent meeting of the American Hospital Association to study the subject of health insurance in its relation to hospitals was opportune in view of the exceeding importance attributed to health insurance on the part of the industrial captains who discussed several papers on this and allied subjects before the health service section. State-controlled health insurance is a rapidly developing feature of our social progress, and hospitals should be prepared to meet the obligations connected with it. An interesting section was devoted to the study of governmental problems leading toward the federal standardization of safety regulations, danger signs, accident records, etc.

The commercial exhibit, which filled the main floor of the largest hall in Detroit, was a highly interesting feature of the congress and attracted great attention. Stimulation to greater achievement and higher industrial and social levels must necessarily be reached because of this congress.

W. L. BABCOCK.

Autopsies in Small Hospitals

Just because a hospital happens to be small and the number of its patients limited is no reason why the work done in it should not be just as good as in a larger and more elaborately equipped institution having a much greater number of patients. The only way that a small hospital can be heard in the great world of science is for it to do things,

and to do them in such a way that they will attract attention even in competition with the greater volume of work being done elsewhere.

Just now we are thinking about autopsies in small hospitals. Dr. Winternitz, in his paper on this subject, read before the American Hospital Association, makes a striking point in the statement that the percentage of autopsies in a hospital is a fair indication of the quality of work being done in the institution. That seems to us an excellent point. If a medical staff is eager and ambitious, it is pretty certain that the administration of a hospital will back up the staff in its anxiety to have as much data as possible on the work it is doing, and there is no data so valuable to a medical man, or to a staff, or to the profession, as autopsy data.

It is true that not very many people die in small hospitals, because the total number of their patients is small, but it seems to us that, in proportion as the number is small and the opportunities limited, so these ought to be taken advantage of. As a matter of fact, one rarely hears about autopsies made in small hospitals, and rare indeed is the unusual involved and obscure case reported out of the small hospital on the autopsy findings.

A lesson from the Mayo clinic ought to be taken to heart by small hospitals. There was a time in the career of Drs. Wm. J. and Chas. H. Mayo when the patients at Rochester were few and far between, but these men made up in the quality of their work, even in that early day, for its lack of quantity, and the first attention that they received from the world of science at large was due to the thoroughness and care that they gave to the few patients they had. If there was a case of goiter, and the patient was operated upon and died, the report of that case, so thorough was it, attracted the attention of medical men who had other cases of like character, and some of these were sent to the Mayos. Presently tens of cases of goiter could be reported, and these in turn brought hundreds of others, and it was not long before the Mayos could report a thousand goiters—but always with the same care and thoroughness as to the work done. A great deal has been said about the methods that have achieved greatness for the Mayo clinic, but in a final analysis this is precisely what built that great institution—viz., the thoroughness of all the work done, both in reporting the case or cases and in the compilation of the literature on other cases of like character. This same thing can be done in any small hospital in this country if the ambition and the hunger for knowledge is there.

Just now the American Association for the Study of Cancer is asking the medical profession

and all the hospitals of the country to report their cases, and a recently appointed president's advisory board on first aid and similar hospital and dispensary services is sending out a questionnaire as to certain kinds of work done in hospitals. These are opportunities for medical men in small hospitals to get themselves and their institutions into the spotlight, and they should take advantage of the opportunities.

Standardized First Aid in the Hospital

One of the great complaints of surgical hospitals, particularly those engaged in emergency work, is the bad condition in which injuries are received, the damage being already irrevocably done before the patient is admitted. THE MODERN HOSPITAL hopes that the president's Board on First Aid Standardization will be able to so inculcate the lesson of preventive surgery into the mind of the general public that this condition will, in a measure at least, be controlled.

The American First Aid Conference convened at Washington on August 24, 1915, largely as the result of the work of Dr. Joseph Colt Bloodgood, of Baltimore, Md., and recommended to President Wilson that he appoint a board for the purpose of deliberating carefully on first-aid methods, packages, equipment, and instruction, and recommending a standard for each to a subsequent session of the conference. This conference was composed of some of the leading industrial surgeons in the country, as well as officers from the army, navy, and public health service. The president thought well of this scheme of placing first aid in America on a standard basis both for peace and for war, and appointed the following board: Dr. Richard H. Harte; Colonel Louis A. LaGarde, M. C., U. S. A.; Assistant Surgeon General W. C. Rucker, U. S. P. H. S.; Dr. J. P. Kaster; Dr. Samuel C. Plummer; Surgeon A. M. Fauntleroy, U. S. N.; Dr. J. Shelton Horsley; Major R. U. Patterson, M. C., U. S. A. Subsequently Congress appropriated the sum of \$2,000, to be used by the Bureau of Labor Statistics in cooperation with the board, whose existence was legalized by the Sundry Civil Act of 1916. The board is now engaged in collecting expert opinions from a selected group of surgeons throughout the United States, and a questionnaire covering the moot points of first aid is being sent to those who have volunteered to do the work, which is inevitably incident to answering these questions. As soon as the data has been collected and digested, it is planned that the board shall issue a report which shall be technical in nature, this to be followed by a handbook to be distributed throughout the nation. This

is in reality a part of the medicomilitary preparedness scheme, but has the double advantage of preparation for peace quite as much as for war.

W. C. RUCKER,

Secretary of the President's Board on First Aid Standardization.

The Newer Hospital Service

It is the duty of every hospital superintendent in this country to acquaint himself thoroughly with the laws of his state concerning hospital practice and hospital methods. Due to the activities of the Association for Labor Legislation, the legislators of almost every state are passing laws, at almost every session, in some way involving hospital service. Some of these laws are not in the best interests of the hospitals, but far more of them are in step with the general progress of the country in the care and treatment of the sick, and in the applications of our common humanitarian principles. A knowledge of these laws will very often be of great advantage to hospitals, as, for instance, the workmen's compensation law and the sick insurance benefits. Some laws are exact in their requirements, and they specify details to such an extent that the hospital administrator who does not know the exact reading of the law may lose much money for his institution.

Any hospital administrator can write to the secretary of state at his state capital and secure a copy of the laws that bear on hospital service, and he should lose no time in doing so. Most hospital boards have an attorney, and this attorney should see to it that a copy of all the laws having to do with hospitals and their service is in the hands of the superintendent. These laws are usually compiled in small leaflets, and they should be bound, their context borne in mind, and these bound laws kept on the superintendent's desk for ready reference.

The Small Community Hospital

Dr. Hornsby's continued story of "The Small Community Hospital" is unavoidably crowded out of this issue. In January Dr. Hornsby will take up the equipment of his "Small Hospital," and will undertake to give all the items, even down to the pins and needles, that make up such an equipment.

The cornerstone of a large hospital building being erected at Hart street and Stuyvesant avenue, Brooklyn, N. Y., by the Beth Moses Hospital Society, was laid Thanksgiving week. The building is to be a modern fireproof structure five stories high, with a capacity of at least 100 beds. The names of Isaac Levin, David Werbelowsky, John Sklar, Israel Rokeach, and Morris Robinson are among those prominently identified with the society.

Margaret Teresa O'Donovan, Nurse

BY FATHER HENRY B. TIERNEY, Trenton, Mo.

THE beautiful theme of this whimsical verse
Is Margaret Teresa O'Donovan, nurse;
There's a lilt in her laughter, a joy in her smile,
She's a bright bit of sunshine from Emerald Isle;
When she speaks, all the shadows of sorrow disperse,
God bless you, Tessy O'Donovan, nurse.

Like a flood of God's light when you open the door,
His sunshine enshrines you, Tessy, asthore;
Your heart is as true as your laughter, I know,
May angels go with you wherever you go;
'Tis a joy to be writing of you in my verse,
Margaret Teresa O'Donovan, nurse.

You ask how I am; sure I think I am worse
For the want of a smile of a sweet Irish nurse;
Faith, the world is so full of false notes, anyhow,
That your voice is the music I'm treasuring now;
You come like the morning, my pains to disperse,
May the Savior be good to my fair Irish nurse.

The patient not cured at the end of a week
Who basked in your smiles and each day heard you speak,
Is dead and don't know that he needs a black hearse;
To resist your dear wiles is self-murder, or worse;
Then here's to the hospital girl of my verse,
Margaret Teresa O'Donovan, nurse.

The light of old Ireland enkindles your eyes,
Her hawthorns, her roses, her smiles and her sighs,
The peace of her valleys, the smell of her sod,
The love of her people, the faith of her God,
Crimson your cheeks and all shadows disperse,
A sunbeam from Erin is Teresa, the nurse.

When, true to the faith of your mother, asthore,
You kneel down at night the great God to adore,
Will you offer a bit of a prayer for me?
Sure, I'll oft think of you at God's altar, machree;
Then goodby, mavourneen, I'm ending my verse
In praise of sweet Tessy O'Donovan, nurse.

The Lutherans of New York city opened a large, new hospital at Convent avenue and One Hundred and Forty-fourth street on October 30. The institution, which will be known as the Lutheran Hospital of Manhattan, is the outgrowth of the Lutheran Inner Mission Society, and received its charter and the approval of the State Board of Charities in 1911. A successful district medical service has been maintained for several years. In 1912, by the will of the late Dr. Inslee H. Berry, the hospital association received Dr. Berry's entire residuary estate. This and other benefactions have made possible the modern building now in use, every appointment of which is said to be in accord with the latest requirements of hospital science.

A number of persons, variously reported at eleven to nineteen, and including both adults and children, lost their lives in a fire which destroyed St. Elizabeth's Hospital at Farnham, Quebec, October 26. The fire occurred early in the morning when most of the patients were asleep. There were more than 300 persons in the buildings burned, one of the structures being used for the housing of school children. A number of these children were badly injured by jumping from windows to stone pavements. A defective chimney is believed to have been the cause of the fire. The institution was managed by the Grey Nuns, many of whom, it is said, risked their lives in efforts to save patients and children from the flames.

Articles of incorporation have been filed by Carl Beyer, H. R. Tribble, and Louis Sipkins, of Minneapolis, for an institution to be known as the Loring Park Sanatorium. The capital stock will be \$50,000.

Excavation has been started at Anamosa, Ia., for a \$20,000 addition to the Mercy Hospital of that place.



HOSPITAL, MEDICAL, AND SPECIAL MEETINGS

AMERICAN HOSPITAL ASSOCIATION

* * *

Official Bulletin for December—Issued by the Officers of the Association

PROCEEDINGS OF THE EIGHTEENTH ANNUAL CONVENTION

Compilation of the proceedings of the eighteenth annual convention is progressing, and the books will be mailed to members at a much earlier date than heretofore. Authors and others who may desire reprints of papers read at the convention are requested to file their orders with the secretary at an early date. The price of reprints will depend on the number wanted and binding specified.

TRUSTEES' MEETING

A meeting of the trustees is scheduled to be held during the month of November, at which time many questions of vital interest to the association will be acted on. Items of interest to members will be duly reported in these columns.

EMPLOYMENT BUREAU

As rapidly as developments will warrant, an active agency will be inaugurated for the placing of competent superintendents, assistants, housekeepers, dietitians, special nurses, etc. The growth and utility of this undertaking will be entirely dependent on the cooperation of the members of the association. The secretary will keep in close touch with all organizations that may require the services of experienced executives or other minor positions that can be filled from our membership, to which the services of the bureau will be confined. You can assist this much-needed innovation by reporting to the secretary the names of those who are available and by communicating your own wants to this office.

MEMBERSHIP

Attention is invited to the provision of the revised constitution and bylaws in respect to membership in the association. Trustees, superintendents, assistant superintendents, or members of medical staffs of hospitals are all eligible to active membership, the dues being \$5 per annum or \$50 for life. Heads of any executive, administrative, or educational department, contributors or members of any association or board, the object of which is the foundation, maintenance, or improvement of hospitals or the promotion of organized charities for the improvement of health, may become associate members, the dues being \$2 per annum or \$25 for life.

Now that the gates are open for many who hitherto could not join the association, it is hopefully predicted that every member of the association will become a committee of one for the purpose of increasing membership. The power and influence of the association will be increased in direct proportion to the number and quality of its membership.

There is a large, fertile field from which we can, if we will, recruit new members, men and women who have

plodded along for many years unassumingly and unpretentiously, accomplishing great things and continually acquiring new knowledge from the potential academy of life; they have been willing and ready listeners, adapting to their own uses what they have seen and heard. We want these people on our rolls, for oftentimes those who are the most learned are the most modest of all—the readiest to admit their ignorance and the first to listen. Each one of us can help the association by adding his or her stock of definite accurate knowledge to the small stock now available, for, after all, we are like the muskrat in Kipling's jungle tale, who was "full of stories half heard and very badly told."

HOSPITAL CENSUS

To assist in correcting the membership list and for the purpose of surveying the hospital field as a preliminary move prior to our campaign for new members, the secretary desires copies of every hospital's annual report in the United States, Canada, Mexico, and South America, and will feel duly grateful to members and others who will assist us in this undertaking. Send your own report at once, and then endeavor to procure those of other hospitals not represented in the association.

COMMERCIAL EXHIBIT

The great majority of exhibitors who participated in the Philadelphia convention were highly gratified by the attendance and the amount of business transacted; a few, however, were dissatisfied, and not without reason, since little or no attention was given them by the members.

Every effort was made by the local committee to impress on members the fact that the exhibits were not for the sole fulfillment of a trade purpose, and that those who inspected them would not be unduly urged to buy. Visitors are free to examine every article shown; they may ask questions, make suggestions, and study at their leisure the advantages to be derived from a combination of science and industry as applied to the manufacture of the implements of precision and the complex machinery, equipment, and supplies so necessary to the successful management of the modern hospital. You will find the exhibitors to be, in every sense of the word, gentlemen—always ready to advise, help, and cooperate; they will take orders for goods if you offer them, for this is their business; but they expect to get your good-will and at least a few minutes of your attention. We ask you, therefore, to spend a little more time next year in the commercial exhibit, for by so doing you are broadening your own education, and you may, perhaps, discover something that will be of inestimable value to your hospital.

SECTIONAL ORGANIZATIONS

On many occasions the association has placed itself on record as favoring the formation of local organizations for the improvement of local conditions, and such bodies of active and enthusiastic workers have accomplished much in their own particular field. The American Hospital Association, however, through its large membership and wide geographical distribution, should, in a sense, be considered the parent organization, and should receive the loyal support and cooperation of all hospital people, regardless of local or sectional affiliation. We, therefore, make a special appeal to all state, territorial, sectional, municipal, or other associations of hospital workers to urge and encourage their members to join the American Hospital Association. The association needs the aid of everyone who is eligible for membership. On the other hand, we believe that everyone engaged in hospital work can profit from the advantage of association with others engaged in a

similar work. It is amazing how narrow and archaic a circumscribed community will become if deprived of free communication with other sections and peoples, and this is more markedly true as regards hospital work, which has undergone almost a revolution during the last decade. However valuable may be your deliberations with those of your own locality, you must go beyond that to learn of the progress of others, and it is for the coordination of this universal knowledge that the American Hospital Association serves us all.

For Hospital Standardization¹

BY JOHN G. BOWMAN, Director of the American College of Surgeons.

On behalf of the American College of Surgeons permit me to say, right at the start, that we have accepted, with great seriousness, your kind invitation to meet with you today. In many essentials the aims of the American Hospital Association and of the American College of Surgeons are one and the same. We hope that our interchange and discussion today will be of lasting importance. We have in common a vast complexity of good intentions, and to talk them over together now and then is wise. More than this, we hope that this occasion will mean that we, as two powerful groups, shall work together, and that, by good team-work, we shall make a larger measure of our good intentions come true.

In order, now, that we think straight across the fields wherein our common purposes lie, let me review briefly the expressed purpose both of your association and of the college. By your constitution you emphasize your aims toward the "promotion, economy, and efficiency in hospital management." You are concerned with hospital construction, with finances and economics, with national and state legislation, and with systems of accounting. You are concerned, also, with medical organization and medical education, with the training of nurses, and with out-patient work. In the last analysis all of this means that your energies go toward the proper care of sick people, and also toward the prevention of disease.

The College of Surgeons, on the other hand, is an association of 3,500 surgeons of the United States and of Canada. It is an infant among medical societies; but I trust that I may say with due modesty that your success and ours are closely related, and that in the last analysis the beginning and the end of the College of Surgeons is the proper care of sick people, especially as they may be in need of surgical service, and also the prevention of disease. Our common meeting grounds are wide.

But, more specifically, what is the college? It is an association pledged to the most idealistic program ever expressed in any profession. Its program includes the elevation of standards of medicine, moral as well as intellectual. It is a guarantee of no indefinite sort to the public of honest and competent surgery. It is an association to encourage scientific advance in medicine and surgery. It is a national force to put an end to guesswork in diagnosis, to put an end to unnecessary operating, and to blot out the vicious practice known as the division of fees. Better, probably, than any group of men and women who gather themselves together in this country, you know the extent of these evils and of the unnecessary pain and death that trail in their wake.

Just a word here about fee-splitting. You know what it is, and you know that any doctor guilty of this practice is, under the most sacred relations which exist among men, both a liar and a thief. Milder terms are inadequate.

More than any other one factor, this practice is responsible for unnecessary operating and for operations by incompetent surgeons.

In the old-fashioned way now of a heart-to-heart talk, let us ask ourselves some questions: What headway are we actually making toward the better practice of medicine? Are we satisfied with our efforts? How often in the struggle does the blood rush to our finger-tips?

About a month ago, near Nashville, I visited the Hermitage, which is the old plantation of Andrew Jackson. My friend who was showing me about the estate told me that Andrew, at his death, left a slave by the name of Alfred. Alfred lived many years about the place. One day he was asked if he "reckoned" that the general went to heaven. "I dunno, suh," he replied; "he did if he wanted to." This is the philosophy which stirs me more than any other. We can do things if we want to. We can bring ideals down out of heaven if we want to, and make them live in any community or in any hospital. The difficult thing is to want to, and to put the want into incisive action.

There is a social law which operates unconsciously among us to the effect that as our organization in society becomes more and more complex, our individual freedom of action decreases. We attain freedom under this process, but not of the barbaric variety. It is freedom in conformity to law. And with these changes comes an increasing tendency that our ways become fixed. The fact is we are born into a society whose customs we accept as a child accepts the atmosphere it breathes. Increasingly we look on the man with suspicion who would change our ways, and especially is this true in hospital organizations where the routine from cellar to garret is sharply defined. In fact, hospital folk scarcely have their equal in this country for their conservatism. For example, less than two years ago there was a hospital superintendent in the Southwest who went from room to room each morning with a little pot of burning tar on the end of a wire. He was fumigating the rooms. Physicians and surgeons protested that at this date there were better ways of fumigation. But the hospital superintendent had always fumigated in this fashion, and it was only with a pathetic wrench of his conscience that he finally gave up the established custom. In another hospital of approximately 200 beds the leading surgeon recently explained to me that they had always got along very well without case histories of any description. "Why," he asked, "should we disturb our success now by introducing this new stuff?" Again, from one coast to the other today many hospital trustees are sitting quietly by, allowing surgical operations to be performed in their respective hospitals after the merest guesswork in diagnosis. They defend themselves in this matter with the feeble statement that such procedure has always been the custom. Any hospital trustee or hospital superintendent today who sits quietly by and allows obviously incompetent work to go unquestioned, or who tolerates the division of fees, is unworthy of his trust.

I do not mean to infer that the motives in any instance cited are wrong. The point is that we are bound in our philosophy, in our life policies, in our conception of right or rights, and even in our religion, by the customs into which, without our consent, we were cast. Only by degrees and through genuine leadership and new economic demands do we change our established customs.

In a more primitive society, when the established ways of the folk became intolerable, a revolution ensued. Then the ways were changed. In these more modern times we are less harsh and less emphatic. We steer clear of revo-

¹An address before the eighteenth annual conference of American Hospital Association, Philadelphia, September 26-29, 1916.

lution; we use perhaps greater intelligence. Our progress is characterized by progressive development.

My purpose now is to ask you to free yourselves, for a little while at least, from the bonds of custom and to ask you to agree with me, in so far as you will, on a program of activity for the better welfare of those whose care is intrusted to us. Our business is to know what we want to do and then fearlessly to do it.

Since the early days of the organization of the college it has been evident to the regents of the college that they must necessarily acquire accurate data with regard to the hospitals of this continent if they are to administer the college effectively and with fairness. Just a word further, now, in explanation of this matter. The College of Surgeons is an organization to which are admitted surgeons who are honest and who have proved themselves qualified in surgery. But what does it mean to be qualified in surgery? It is a fair statement, I believe, to say that 80 percent of the knowledge used by the surgeon in his practice he acquires during his internship and his assistantship in a good hospital. An educational function has been forced on the hospitals almost without their realization. As an administrative necessity, the College of Surgeons is interested to know what training the hospitals exact of the young doctors in their service during this period. A tentative outline of this problem has already been issued by the college and is in your hands. Beyond question, there is benefit to be had, both by yourselves and by the college, if together we take up this subject and go to the bottom of it. This is part of the task to which we must address ourselves if we are ever individually to express in our work our true personal equations.

Many other subjects within our common fields of activity call for similar treatment. For example, what is the right procedure in the management of a hospital? This question calls for a specific answer as to the duties of a board of trustees, of a superintendent, and of a hospital staff. Again, in a hospital, let us say of 100 beds in a small city, what are the laboratory facilities and the equipment requisite for the adequate care of patients? What is the responsibility of such a hospital to the entire local profession and to the community? Is the staff to be "open" or "closed?" These, among many others, are the perplexing problems on which we should turn our clearest moments of thought, and which we should, by exhaustive study, solve. Our request is that we solve such problems together.

During the next three years the college has planned to spend at least \$20,000 a year in the study of such problems as I have mentioned. The college takes up this work, asking the good will and cooperation of all concerned. It pledges itself to proceed in a kindly and sympathetic spirit, to be helpful always rather than critical. On the other hand, the program would be quite ineffective if it were not carried out in a sound and scholarly way. The first step is to obtain accurate data, and then to marshal these data fearlessly into a simple, comprehensible, and useful form. Such a series of studies, I am confident, will serve as a powerful lever for the advance of our purposes. It will serve as a bond by which each of us may accomplish greater ends than is possible single-handed.

On behalf of the regents of the college, I am authorized to ask the American Hospital Association to appoint a committee to cooperate with the college in this proposed series of studies. The regents ask that this committee advise with them from time to time as to the most useful fields of investigation, ways of procedure, and distribution of the published studies. The Carnegie Corporation has kindly agreed to contribute \$30,000 toward this work.

There is one other matter which I beg, with all kindness, to mention. It is fundamental to the success of the entire program. In many a community today the medical profession is engaged in undue rivalry and jealousies. Local groups of doctors are divided into little cliques, which indulge in unkind or bitter criticisms of one another. Such a condition, where it exists, defeats the public support to which the men are really entitled; it defeats the spirit of progress. Not infrequently officers of hospitals are drawn into this petty quarreling. Now, all of this we can stop if we want to stop it. A southern evangelist used to thrill his audience by saying, "Quit your meanness. How are you going to quit it? Why, just quit it." We need to be happy twenty-four hours a day, and in our hearts to understand that days of happiness are the days which make us wise. Do you ever consider how changed a place your hospital would be if everybody in it began work every morning having forgiven everybody everything? In closing I venture to say that such a hospital would never have a serious financial problem to meet, and that the death rate would go down where it belongs.

Hospital Accounting and Finances¹

BY DR. A. R. WARNER, Superintendent Lakeside Hospital, Cleveland, Ohio.

Hospital accounting is more than ordinary business accounting. In addition to the figures presenting the detail of all cash transactions, as well as store figures and groups of figures representing net costs, there must be a report to philanthropy—to society—for the administration of funds pledged for the betterment of mankind. A factory or business has its output and its loss and gain accounts to compare with and to interpret the routine figures, but the output of the hospital is dissipated into many channels without a common denominator or a satisfactory basis for financial comparison. The ward patients are usually the greater part of the expense, but dispensary work and emergency patients are often a considerable factor. Laboratories of all kinds and research work and workers are, however, claiming a progressively greater portion of a hospital's available funds. The training of nurses and the post-graduate training of medical students are necessarily and wholly hospital problems, and the responsibility for the quality of our future clinical medical profession, as well as that of the nursing profession, with the attendant expense, rests squarely on hospitals. Well-trained men and women are as legitimate an output of a hospital as days of treatment, and may in the end prove the better investment for society. All this makes it extremely difficult to measure the output of an institution or to compare this output with the cost.

Society has in the past regarded hospitals as charities, and the sole requisite of the management was that it must be satisfactory to the contributors; but society is coming to realize that hospitals are institutions necessary for its existence—to be promoted, conserved, and managed as any other necessity—and hospital administrators are becoming very familiar with the word "efficiency." Trustees and practical philanthropists are now asking pointed questions about particular institutions and public health institutions in general.

No attempts to evaluate the worth of hospital service to society, and thereby to answer the questions directly, have been made. All who have seriously attempted the indirect method of measurement by comparison with other hospi-

¹Read before the eighteenth annual conference of the American Hospital Association, Philadelphia, September 26-29, 1916.

tals of good repute have come to realize the impossibility at the present time of comparing institutions, even in a broad way, by deductions made from published financial and statistical reports.

Although uniform hospital accounting is a term very familiar to us all, it has never been, even to a small degree, realized. It has been an almost universal custom, when a hospital's accounting system was questioned or disapproved, to employ the services of a local accountant, well trained—usually well trained in business. With perhaps some, or even very little, regard for the suggestions of the superintendent—if, indeed, any are offered—a system for this hospital is duly formulated, presented, and adopted. By these methods we can never better our understanding each of the other. Hospitals vary so widely in their organization, in work done, and in the financial support, with the locally developed customs for handling details of this financing, that accounting systems are devised for particular conditions and particular hospitals, and an understanding of general hospital conditions and hospital work has not yet been attained by accountants. And the hospitals have done nothing to develop broader men or better systems.

With this larger idea of hospital accounting in mind, this paper will attempt to bring out the following points:

1. Uniform distribution headings for expenses are at present impracticable. The bases for these must be standardized first.

2. Published figures for operation cost should not be on the cash basis, or, in other words, simply the "bills paid," but represent value of supplies actually issued and of wages actually earned in the given year.

3. Certain figures and totals can now be standardized and made uniform—figures representing output, receipts, and costs. Published figures must be truthful totals.

4. Reports must be written as an accounting of a trust to the community and for the benefit of society; not as the arrangement which makes a good showing compared with last year.

5. Recommendations that the American Hospital Association do now adopt certain figures as a uniform standard and certain basic principles to be observed in writing reports, and also establish a permanent committee to carry forward the study of the problem and from year to year make additional recommendations as to standards.

1. A system of accounting which would include all the sources of income received by hospitals, and have expenditure headings for all items of expenditure in the various hospitals, would necessarily be very extensive and therefore cumbersome. Each hospital would need to sort out those headings which fitted their work, and there would be even more than the usual difficulty in determining under which heading to classify a given expenditure. The side that trained business accountants do not know must be generally understood before this can be done. Otherwise it would be attempting to build without a foundation.

After all, it is usually the essential facts or compilations from detail accounting which can be used outside the institution itself. For example, the published figures of laundry cost of a given hospital are of absolutely no value until it is definitely known whether the laundry employees are housed and boarded and to what extent, whether patients are used in this work and to what extent, whether gasoline cleaning and other special cleaning is included, and whether the department carries on the routine renovating and sterilizing required by mattresses, blankets, etc. The custom of the hospital as regards amount of distribution before the publication of a report

must be known. For example, was a sum deducted from the food and housekeeping accounts to allow for the laundry help boarded by the institution? Was an item for heat and power included? One may carry the question farther. Did the figure for the cost of power include items representing the food and housekeeping cost or the maintenance of the engineers and firemen? When one investigates the actual cost of any department or item of expense, one meets with the same questions, and each function is dependent on the others. It is, therefore, practically impossible to report figures representing the actual cost of groups of items or of any department. Fairly accurate approximations for any department can be worked out for a given hospital, but only with considerable difficulty and by some one entirely familiar with the organization of the work in this hospital. Reported figures in general must therefore remain, as in the past, simply the direct charges made to any item or department. Even under a uniform list of headings this method would always be subject to two influences. Every superintendent knows that under the same headings it is extremely difficult to keep charges uniformly classified from year to year. Different persons will interpret conditions differently, and every department will tend to charge some other department with doubtful items. The second course of differences will come with the inevitable changes in organization and work. A better bookkeeper or a better system of bookkeeping, general or departmental, will always result in the transference of many items from the general headings to be more specific. For example, greater accuracy adds to the direct charges of a training school and lessens those of general administration. The best that any hospital can do at the present time in distributing expenditures is to make a careful study of the organization and work, then arrange a system of headings that can be split most readily into factors belonging to other departments and can be reassembled to give total costs of various functions. In a given hospital it is not difficult to determine fairly accurately the proportions of the cost of the power plant belonging to the laundry, dispensary, wards, etc.

2. The work of even a small hospital is so complicated, and requires so many departments and so many kinds of work, that even approximate figures for the cost of any given item or department cannot be obtained without a system of accounting independent of cash expenditures. The reports of some hospitals are based entirely on cash expenditures, and therefore represent simply bills paid by them in the year in question. No allowance can be made for differences in the amount of goods on hand, which in any well-managed institution must vary considerably according to the conditions of the markets. It cannot allow for such items as gauze sold a local relief agency, uniform material sold a graduate nurse, etc. One cannot approve of a superintendent taking this money and replacing with new goods without carrying the transactions on the books, or any other subterfuge to prevent cash expended for particular items appearing. Certain credits, as the item for butcher fats, can appear as a cash credit if sold outright; but no cash system can allow for this item if the suet, in place of being sold, is turned over to the laundry to be made into soap. A system of passing all invoices through a central store room will charge direct those expenses incurred on account of some particular department and all items purchased for immediate use, and will carry on stock cards supplies purchased for use in several departments or carried some time in stock. These supplies are charged as issued to the various departments or uses.

By such a store room system account can be taken of stock on hand and all credits and common supplies distributed as used. By such a system all expenses can be reported as net, and, on a system of headings, carefully arranged for splitting and redistribution as desired. A stores system of accounting will save more than its cost for any hospital.

3. There is no reason for combining hospital and dispensary patients. The dispensary figure essential in accounting is the total number of visits. The total cost of the dispensary divided by this figure gives the cost per visit. Dispensary work is now becoming sufficiently organized and standardized so that it is possible to form quite accurate opinions of the service rendered in a dispensary maintained at a given cost per visit. This must assume, however, that the total dispensary cost is accurate and complete, and that common items of expense, such as power plant, etc., have been prorated between the hospital and the dispensary and included in the dispensary total. The essential hospital figures are total number of patients, the total number of days of treatment given, and the total number of short-time or emergency patients. The emergency work for patients who do not go to the wards represents so small a factor in the expenses of an institution that they are usually neglected in the financial accounting; yet the number should be kept separate from the number of ward patients. The number of patients and the days of treatment should be subdivided into "pay patients," who pay the cost of their care or more; "part-pay patients," who pay part of the cost of their care; and "free patients," who pay nothing at all.

The total operating or maintenance cost divided by the total number of days of treatment given gives per capita cost. This figure also represents very accurately the value and quality of services rendered by a hospital, if due allowance be made for the size of the institution and if the total operating cost figure be correct.

The next year will see many questions about methods of securing correct hospital cost totals brought up in the Cleveland hospitals. Through the Hospital Council it has been established with the State Industrial Commission and the local corporations that the responsibility for the care of industrial injuries requires that hospitals be paid for ward treatment at the rate of per capita cost. A less figure or the usual ward rate is really giving charity to the corporations and to the state, and this is unnecessary and unwise. As fast as contracts are running out, the hospitals of Cleveland are insisting that they be renewed at per capita cost figures. This will bring into active discussion all factors contributing to total operating costs.

If the total operating cost is correct, component parts must be, in turn, correct; and, if arranged for study, they can be used in many ways. For example, the total number of days of treatment divided by the total number of patients gives the average stay of each patient. This, with a knowledge of the general character of the work done in this particular institution, will tell much of its efficiency. Some hospitals can do certain work in a shorter time than others. This is particularly true of surgical patients. The longer time consumed for x-ray examination, for laboratory, and for other details materially affects the average stay for given work. Every misstep in hospital technic lengthens the patient's stay. The ratio between the x-ray supplies used and the number of patients indicates accurately how well this safeguard to diagnosis is used. The same is true of other laboratory procedures.

It is now generally conceded that capital accounts should be kept entirely separate from maintenance ac-

counts. In capital accounts are included all receipts or disbursements from endowment funds, or transactions on account of real estate or new buildings. By common concession the ordinary upkeep of grounds and buildings is included in the maintenance or operating accounts, but extraordinary repairs or additions are carried in capital accounts. The basic principle seems to be that the hospital should be given a place to work, but that all expenses connected with activities of an institution are proper charges against maintenance. The expenses of campaigns or the carrying out of any other means of raising funds should be charged in full either to capital or to the maintenance accounts as the money raised is applied. The money all comes from the community, and a full and correct accounting should be rendered.

To be useful, maintenance or operating accounts must be the whole and the exact truth. Not long ago it became advisable to know the exact x-ray receipts and the exact x-ray expenses of a certain hospital. To obtain each of these figures, three factors were necessary: 1, the receipts and the expenditures carried on the hospital books and reported in the annual report; 2, that portion of the receipts used to pay bills directly without either side appearing in the published report; 3, the income of a special endowment for x-ray work, which was used directly to pay bills without inclusion in the published report. The lack of value of such published figures for comparison or to study hospital efficiency is readily apparent. Such a condition is wrong from several viewpoints. The activities of this department, as ascertained by the published financial reports and compared with the number of patients, would indicate a lack of development of x-ray work in this hospital. It would give a false impression of the amount of this work used to safeguard patients, and therefore place on the defensive both the staff of the hospital, for its attitude toward accurate work, and the superintendents of the other hospitals, in their efforts to secure funds to do this work properly. The fact that a hospital has a special endowment for some particular purpose should not in any way affect the report of maintenance or operating costs of this hospital. The income of special endowments should be carried on the general maintenance accounts as receipts and the corresponding disbursements as expenses. An effort should be made, too, to account for these disbursements correctly. Special endowments may require a hospital to be really lavish with this one item, or else to interpret it broadly on general principles of equity. When this is done and a special endowment really meets other items of expense, the disbursements should be distributed accurately. This may be a little difficult on a cash system, but entirely easy on the stores system of distribution.

All items purchased for the hospital or secured by the hospital, to be paid for by individuals, should be included in the capital or operating accounts, as the character of the item classifies it. Very often some friend of the institution agrees to pay for some new machine or article much needed, and the use of this article directly affects the work of this institution. Other hospitals must purchase this same article. A common basis can be secured only when the institution, fortunate enough to receive such gifts, carries them on both sides of the ledger. Of course this custom will increase the year's expenses; but, if the accounting cannot show up equally plainly the increase in the receipts, it is poor accounting; and, if the added efficiency or the better facilities for work secured through these articles do not influence the reports of the output or the work done by the institution, such articles were either works of art or something is wrong somewhere.

If hospitals will begin by reporting patients as indicated above and strive to make all financial reports a study of actual and total costs independent of local conditions, this alone will constitute a working basis and a good beginning toward uniform accounting.

4. Trustees and those who cannot have adequate and reliable first-hand information of the work of an institution necessarily compare the report of one year with that of the last year. This has been the source of a large part of the fallacies which have developed in hospital accounting. To make a good showing to the trustees in the finances has often been too strong a factor in the minds of those writing the reports. The remedy for this situation is at hand and effective. The financial or operating accounts are, after all, only one side of the ledger, but, as developed by accountants, trained commercially only, it has unfortunately been the prominent part, if not all, of the report. To make the accounting accurate and complete, we must find a way to report the other side—the value of the days of treatment rendered, the work of the dispensary, of the laboratories, the quality of the work, and the contribution of an institution to research and education. Such reports can be made intelligible and even interesting to trustees, and the question of quality of service can be raised. There is really something to show for the money spent. We are coming to know that the removal of one kidney is far from a credit to a hospital if done without determining the condition of the other by x-ray and by chemical efficiency tests. It may not be possible at first for a hospital to apparently get full credit for safe and careful work, but the initiated may learn the facts readily. Hospital accounting developed by hospital workers can be made quite eloquent in sounding praises of the well-managed, progressive institution. It can be made to tell most plainly the story of inefficiency and defective service.

Something over a year ago the Cleveland Hospital Council attempted a beginning in uniform accounting. Money figures were not considered, and this beginning was made after long discussion and deliberation. We agreed to report hospital work in terms of "pay patients," part-pay patients," and "free patients." Since this was adopted, there have been frequent additions to the uniform schedule. The complete schedule now adopted is appended. It is arranged under two headings—"the work" and "the cost." We have attempted to divide the total operating expenses of the hospital, including dispensary, into six headings, but it is generally recognized that as yet this will be the most unreliable part of the report, and we are not yet ready to propose any detail of distribution which can be common to the twenty-one hospitals of the Council, varying as they do in size, in work, and in financial support. The superintendents of these twenty-one hospitals are quite sure, however, that the other figures can be accurately given, and that this can be done without confusion or additional expense for accounting. We know that this much of hospital accounting can be made uniform without difficulty in twenty-one institutions, large and small, public and private, general and special, Catholic and Protestant and nonsectarian, with men and with women staffs, institutions without or with endowments, and varying fully as much as the institutions represented in our membership.

5. Uniform or standardized accounting cannot come at one time, but must have systematic development. It cannot come directly from resolutions adopted by this association. There are boards of trustees, treasurers, and auditors to be considered. Yet, on the other hand, the present time seems propitious to make the necessary beginning.

The following resolution is therefore offered for the consideration of the association:

Resolved, that a special committee of three on hospital accounting be appointed by the president to serve until discharged by the association. This committee shall from time to time propose such recommendations leading to more uniform and comprehensive accounting as it shall deem advisable. The recommendations and reports of this committee shall be considered by the association, and, if the recommendations are adopted, an effort to cause their use in hospitals represented in this association should be made by the members of this association representing such hospitals.

[Schedule of Uniform Accounting]

CLEVELAND HOSPITAL COUNCIL

Report of
(Corporate name of institution.)

For the fiscal year.....to.....

NOTE CAREFULLY

Please return this report by.....to the Cleveland Hospital Council, 308 Anisfield Building, Cleveland, Ohio.

A hospital patient is defined as a person receiving continued medical and nursing attention, who occupies a separate bed and remains not less than twenty-four hours. Persons giving regular labor for their board should not be included in hospital figures, and the cost of their care should not be included in expenses for hospital patients. Waiting maternity patients, infants, and children occupying hospital beds and receiving continued medical and nursing care should be included. The daily census report for the previous twenty-four hours should be taken at midnight.

The days of treatment given should be obtained as follows: all hospital patients as defined above, treated for any part of the previous twenty-four hours, should be included in this report. The total number of such patients should be figured as the days of treatment given on that day.

Out-patient work of all kinds, and the total cost and receipts for the same should be separated from hospital figures and reported under the proper headings. Otherwise the figures for both hospital and out-patient work will be incorrect and misleading.

WORK			
Hospital patients (see above rates)	Number of patients	Number of days of treatment	Amount paid to hospital
1. Pay patients (x).....			
2. Part-pay patients (y).....			
3. Free patients (z)....			
4. Public charges (accepted by county, city or township)....			
5. Total			

(x) Pay patients are those for whom at least the cost of their care is paid. (y) Part-pay patients are those for whom only part of the cost of their care is paid. (z) Free patients are those for whose care nothing is paid. Patients whose bills for hospital service are uncollectible should not be included in this item, but in line 65.

Dispensary patients and emergency or accident patients remaining in the hospital less than twenty-four hours should be reported separately and not included in the above.

6. Beds in private rooms.....	Beds in semi-private rooms or wards.....	Beds in general wards.....	Total
7. Beds in "admitting" or "isolation" rooms or wards (not included in above).....	.....	.....	.....
8. Average days' stay each patient (divide total days by total patients.....)	.....	.....	.....
9. Average patients per day (divide total days by 365 days).....	.....	.....	.....
10. Number paid resident physicians and surgeons (including pathologist and other special residents) Number of interns.....	Total.....	.....	.....
11. Number pupil nurses in school.....	Number probationers.....	Total.....	.....
12. Hospital nurses, average on daily duty: graduate, special....., student.....	Total .....	.....	.....
13. Number male attendants (orderlies).....	number female attendants.....	Total.....	.....
14. Number of other employees (excluding physicians, nurses, attendants, orderlies, and probationers).....	.....	.....	.....

15. Number social service workers.....	Cases
..... Visits.....	.....
16. Number ambulances—For private use of hospital only.....	.....
..... For emergency service.....	For
public use (except emergency).....	Total.....
17. Dispensary patients—New patients.....	Re-
visits.....	Total visits or treatments.....
(New patients are those who have not applied before during fiscal year. New patients plus re-visits equal total visits or treatments.)	
18. Accident and emergency patients (patients remaining in hospital less than twenty-four hours) ..	.....

CURRENT INCOME

<i>Earnings or Receipts from Operating of Hospital Patients.</i>	
19. Pay patients (including the Rose fund.....	.....
Including special nurses.....)	(Patients for whose care at least cost is paid).....
20. Part-pay patients (patients for whose care only part of the cost is paid).....	.....
21. From county, city, or township patients. Public charges (county).....	Public charges (city).....
.....	Public charges (township).....
22. Dispensary receipts .....	.....
23. Emergency and accident room receipts.....	.....
24. Miscellaneous, sales, etc.....	.....
25. Total earnings from operation of hospital and dispensary .....	.....

CONTRIBUTIONS FOR CURRENT EXPENSES

26. Federation for charity and philanthropy—(a) Designated gifts.....	(b) Discretionary gifts
27. Calvary Morris estate.....	.....
28. Entertainments, fairs, etc. (net receipts).....	.....
29. Dues, memberships, etc.....	.....
30. Individuals not included in (a) or (b).....	.....
31. Miscellaneous .....	.....
32. Total contributions for current expenses.....	.....

CAPITAL INCOME

33. Income from endowment funds (special and general) .....	.....
34. Rentals, interests on current funds, etc.....	.....
35. Receipts from sales or other capital funds used for current purposes.....	.....
36. Total capital income.....	.....

SUMMARY INCOME

37. Total operating earnings .....	.....
38. Total contributions .....	.....
39. Total capital income .....	.....
40. Total income .....	.....

CURRENT EXPENSES

HOSPITAL OPERATING EXPENSES

41. Administration (general officers, clerks, stationery, printing, postage, annual report, telephone, etc.) ..	.....
42. Professional care of patients (including special nurses....., salary and wages of nurses, orderlies, attendants, employees, medical and surgical supplies) .....	.....
43. General house department, and property (fuel and light, ice, ordinary repairs, rent, insurance, ambulance, laundry, provisions, housekeeping, etc.) ..	.....
44. Social service .....	.....
45. Dispensary .....	.....
46. Miscellaneous—Travel and transportation, etc. ....	.....
..... Interest on loans for current expenses .....	.....
47. Total operating expenses.....	.....

CORPORATION EXPENSES

48. Salaries (secretary or treasurer) and incidental operating expenses of the corporation.....	.....
49. Expenses for raising funds for income, plant or deficits; for education, advertising and publicity. (a) Commission or salary paid individuals.....	.....
(b) Proportion of federation's expense for collection of funds, for extension, education, and efficiency.....	.....
50. Interest on mortgages and loans.....	.....
51. Taxes, stationery, legal or other corporation expenses .....	.....
52. Total corporation expenses.....	.....

TOTAL CURRENT EXPENSES

53. Total current income.....	.....
54. Cash on hand or deficit at beginning of year.....	.....
55. Total current expenses.....	.....
56. Cash on hand or deficit at end of year.....	.....
57. Average daily per capita cost of patients (divide total cost..... by total number of days of treatment.....)	.....
58. Average cost per dispensary visit (divide total cost..... by total number visits.....)	.....

EXTRAORDINARY OR CAPITAL EXPENDITURES

(To be added to permanent value of the plant.)

59. New machinery, apparatus, etc.....	.....
60. Alterations and extraordinary repairs.....	.....
61. New buildings and land.....	.....
62. Miscellaneous .....	.....
63. Total capital expenditures .....	.....

ASSETS AND LIABILITIES

64. Uncollectible pledges, dues, etc., charged off.....	.....
65. Uncollectible bills for hospital service, charged off .....	.....

ASSETS

	Assets	Liabilities
66. Value land, buildings, and equipment (used for hospital purposes)		
67. Restricted endowment funds.....		
68. Unrestricted endowment funds.....		
69. Cash on hand account principal (uninvested and incomplete for special purposes)		
70. Accounts receivable		
71. Total assets		

LIABILITIES

72. Loans or mortgages.....	.....
73. Accounts payable .....	.....
74. Other miscellaneous liabilities.....	.....
75. Total liabilities .....	.....
76. Excess assets over liabilities.....	.....

OFFICERS OF YOUR HOSPITAL

President.....	Address.....
Treasurer.....	Address.....
Secretary.....	Address.....
Superintendent of hospital.....	.....

MEMBERS OF BOARD OF TRUSTEES

IF CITY INSTITUTION

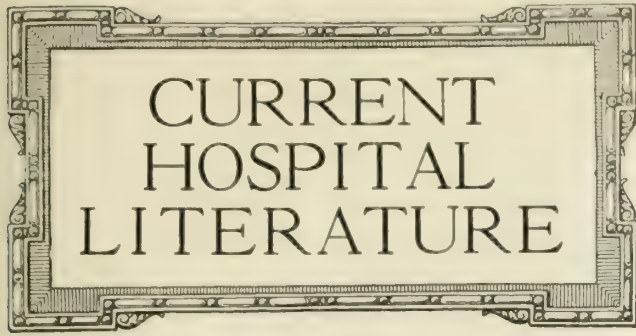
Director of public welfare.....	.....
Superintendent of hospital.....	.....
Commissioner of charities and correction.....	.....
Secretary to director.....	.....

REMARKS AND EXPLANATIONS

Signature of superintendent.....	.....
Approval signature of president or treasurer or secretary of board of directors .....	.....

A campaign which will have for its object the raising of a fund of \$250,000 to build a new and larger home for the Homeopathic Hospital of Providence, R. I., will be launched in that city next June. A building with a capacity of 100 beds is planned, and the site has already been purchased. The institution was established in 1904. Last year 794 cases were admitted to the hospital proper, while 6,632 others received treatment in its out-patient department. The building now occupied was originally a residence and is no longer adequate.

Several changes have recently taken place in the nursing staff of the Vancouver (B. C.) General Hospital. Miss G. N. Snyder, for four years supervisor of the operating rooms, has resigned this position to become superintendent of the training school. During the coming year Miss Alma Hodges, a graduate of the Royal Victoria Hospital, of Montreal, will be demonstrator to nurses. Mrs. I. Buttle, late of the supervising staff, has been appointed assistant superintendent, while Miss A. Peters will become night superintendent.



CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature,
Army Medical Museum and Library, Office of the Surgeon-General,
United States Army.

The Garibaldi Hospital at Melito, Calabria. *Nipologia, Napoli, 1915-16, I, No. 2.*

Melito in Calabria was one of the towns which suffered severely from the great earthquake of 1908. It was then that Dr. Evoli undertook to erect a new hospital. About 400,000 francs were collected for this purpose in Italy and foreign countries. Half of this sum was used for the construction of the hospital (5,000 francs per bed). The hospital has so far 50 beds, with a medical and a surgical division on the first floor. On the second floor is the lying-in and gynecological division. The hospital is located on the coast, with a beautiful view on the blue Mediterranean.

The Royal Institution of the Annunziata in Naples. *Nipologia, Napoli, 1915-16, I, No. 2.*

This institution for mothers and their babies was established through the efforts of Dr. Tropeano in the early part of this year, and has done good work since. It assists more than 1,000 poor families each day. It feeds daily about 450 poor mothers, it furnishes milk for babies of poor families, it gives free medical consultation to mothers, it conducts a crib for babies of mothers who are working during the day. A school teaching the duties of maternity and infant hygiene and a school of eugenics and social hygiene are also connected with the institution.

Convalescence Services in Children's Hospitals in 1916 (A propos des services de convalescence des hôpitaux d'enfants en 1916). Dr. H. Triboulet. *Bulletins et mém. de la Société méd. d. hôp. de Paris, 1916, XXXII, No. 17.*

In order to combat the mortality of children in Paris, the Medical Society of the Paris Hospitals makes the urgent request that the city increase the efficiency of the present children's hospitals and erect new establishments for open-air treatment (1) for nurslings, for whose hospitalization no provision has so far been made, (2) for children convalescing from minor and specific infectious diseases, (3) for children with external tuberculosis, (4) for children with pulmonary tuberculosis, and (5) especially for children in the so-called pretubercular stage—i. e., children with multiple adenopathies and presenting the symptomatic anemia of tubercular infection.

The Hospitalization for Tuberculous Soldiers (Sur l'hospitalization des militaires tuberculeux). Dr. C. Jolly. *Jour. de méd. de Bordeaux, 1916, LXXXVII, No. 5.*

A great number of men who were sound when they joined the army take tuberculosis from the exposure and hardships of the modern trench war, and have to be discharged from the army. The author regrets that in

France no systematic efforts have been made for the care and treatment of these men. He condemns the small sanatoriums and temporary barrack hospitals which have been erected, but which are insufficient to care for all the men. He recommends the erection of large permanent hospitals, which would not only serve during the war, but would be of great value for the treatment of tuberculosis after the war. The south of France is especially adapted to the treatment of this disease. From Bordeaux to Bayonne there is an immense pine forest which belongs to the Government. In this healthful region, so favorable for the treatment of pulmonary tuberculosis, large hospitals could be erected, each capable of housing 800 to 900 patients. For the marine cure the Mediterranean coast of France would also be extremely well adapted for this mode of treatment.

The Ocean Hospital at La Panne. Dr. J. L. Faure. *Presse médicale, Paris, 1916, No. 29.*

On the Belgian sea coast, at the village of La Panne, near the mouth of the Yser, is one of the finest and best equipped military hospitals of this great war. This hospital owes its existence to the energy and exceptional talent of organization of one man, Professor Depage, of Brussels. Aided by the king of Belgium, Dr. Depage in December, 1914, converted the fine Ocean Hotel and a number of neighboring villas in a few weeks into one large hospital. The whole comprises 800 beds, of which 150 are placed in the hotel. One pavilion is exclusively reserved for the reception and disinfection of the wounded. A great number of automobiles are always ready to bring the wounded from the firing line, which is less than ten kilometers distant. Dr. Depage is assisted in his laborious task by twenty-three physicians and surgeons, and 120 Belgian, English, and French ladies are doing the nursing service.

The Central Hebrew Hospital in Amsterdam (Centrale israëlitische ziekenverpleging). *Ziekenhuis, Amsterdam, 1916, VII, No. 8.*

The new Hebrew hospital in Amsterdam was opened on July 4 of this year. It is built of gray brick in a simple style, and is 45 meters long and 13 meters deep. A central corridor, two meters wide, passes through the length of each of the three floors. The second story contains the rooms for first- and second-class patients; the rooms of the latter have two beds each. On this floor is also a room for infants and two operating rooms (aseptic and antiseptic). The nurses' rooms are on the top floor. The hospital has electric light, electric bells, telephone, and speaking tubes to be used on the Sabbath, when the use of the electrical apparatus is not permitted. A large terrace provides for open-air treatment. The hospital has room for 52 patients.

Tuberculosis Sanatoriums in Bratsberg District (Tuberkulose-hjemmene i Bratsberg amt). Dr. H. F. Holst. *Tidsskrift f. d. norske Laegefor., Kristiania, 1916, XXXVI, No. 12.*

The people of Norway are progressive and public spirited. When the movement of combating tuberculosis by the establishment of sanatoriums started, they were among the first to put the new ideas into practice. Bratsberg District had already a sanatorium at Skien, but this was found insufficient. In 1908 it was decided to erect three new sanatoriums, all of which were completed during the last five years. It is noteworthy that, instead of one large sanatorium, three small ones in different parts of the district were erected—one at Hitterdal, one at Kraegeroe, and the third at Koiteseid. All these sanatoriums

are two-story buildings, of simple but practical construction. They are located on mountain sides, commanding a wide view. Each sanatorium has room for 15 to 20 patients. The building costs for the three sanatoriums were 111,500 crowns (about \$30,000.00).

Isolation Hospitals in the War Zone (Gli ospedali contumaciali in zona di guerra). Dr. L. Mazzetti. *Giornale di med. militare*, Roma, 1916, LXIV, No. 5.

To prevent sick and wounded soldiers coming from an infected zone from being carried into the interior of the country, the medical department of the Italian army has decided to establish observation hospitals near the front, where all sick and wounded soldiers are kept under observation for a certain period. Here the soldiers are cleaned, disinfected, and treated, and necessary operations are performed at once. The author describes such a hospital established near the city of Udine, consisting of five two-story pavilions for the sick and eight additional buildings. During the last four months 10,640 patients have been treated at this hospital. Among them 114 were found to be carriers of infectious diseases.

The Day Sanatorium "Het Weusthag" of the Anti-Tuberculosis Society at Hengelo (Dagsanatorium "Het Weusthag" der Vereeniging tot bestrijding der tuberculose te Hengelo. Tuberculose, s' Gravenhage, 1916, XII, No. 3.

Hengelo, a town of about 6,000 inhabitants, has a considerable factory population, among whom tuberculosis is not rare. At a meeting held in June, 1912, of the workmen and factory owners of the town, it was decided that each workman should contribute 1 cent every week toward the establishment of a day sanatorium for tuberculous patients, and that each factory owner should contribute as much as all his workmen together. The community gave 1,000 florins and a number of public-spirited men contributed various amounts, so that in 1914, 16,000 florins (about \$7,000) had been collected. This was sufficient to erect a small building with two open-air halls and the necessary equipment. The patients stay at this sanatorium only during the day. To provide for the necessary running expenses, the workmen and factory owners continue to make the same contributions mentioned above.

Hospital Experiences with an Open-air Hall (Ziekenhuiservaringen met een openluchtzaal). Dr. J. C. Wortman. *Ziekenhuis*, Amsterdam, 1916, VII, No. 8.

An ordinary sick-ward of 16x8.8 meters was converted into an open-air hall by widening the windows on the two long sides and putting in their place sash windows of such form that only the upper or lower half of the whole window can be closed. The beds are placed before the windows in such a way that the patients can look out, their feet being turned toward the windows. Movable curtains are placed behind and between the beds. During winter time the patients are provided with additional coverlets, woolen jackets, gloves, and skull caps. In the cold season the windows are closed only during very unfavorable weather. The patient usually prefers such an arrangement to an ordinary sick-ward. Instead of looking at his fellow sufferers, he looks out into open nature, on the green trees and blue sky. The pure air has a very favorable influence on his general condition. All the patients have better sleep, wake up refreshed, and show a better appetite. Of 193 patients treated in this manner there were scarcely five whose condition was not favorably influenced. In all cases of pneumonia, gastric, intestinal, liver, and heart

disease the improvement was marked. This treatment was also very successful in tuberculosis, croupous pneumonia, pleurisy, bronchitis, and gangrene of the lungs. In pneumonia the cool atmosphere exerted an especially beneficial influence on the restlessness and the febrile and delirious condition of the patients. As would hardly be expected, rheumatic conditions are also favorably affected by this method of treatment. Only two cases of pernicious anemia and some cases of neurasthenia did not bear this treatment well.

A Modern Pavilion Hospital on the Barrack Style (Un moderno padiglione ospedale a sistema baraccato). Ing. G. Marcovici. *Rivista di ingegneria san.*, Torino, 1916, XII, No. 12.

The author describes a pavilion of the hospital service of the Italian army which presents various interesting features. It consists of a long, narrow one-story building, divided in the middle by a partition which completely separates the two divisions. Each division contains 8 beds (4 on each side) and the necessary service rooms. The entrances to the sick rooms are on the narrow sides of the building. The most interesting feature lies in the construction of the pavilion. The four sides of the building are formed by a double wall of large flat hollow tiles, with a hollow space between the two walls. Pillars of reinforced concrete hold the walls in position and support the roof. Where the tiles join, flat irons, protected against rusting, connect the tiles of the inner and outer walls. There being three air spaces in the walls, the patients are thoroughly protected against changes of temperature. The author adds that such a pavilion can be built at a low cost and in a very short time. A military reserve hospital on this plan containing 200 beds is now being constructed for the Italian army.

The Education of the Nurse. Gordon K. Dickinson, M. D. *Journal of the Medical Society of New Jersey*, XIII, No. 9.

The nursing profession has been organized in the states, and has exerted its influence as a professional body on hospitals, allied institutions, and legislatures. The prime object in establishing a nursing school was for the care of the sick in the hospital and in the home, that the physician and surgeon might have some one to intelligently observe his cases and carry out his instructions. The fact that hospitals are taking on themselves the training of nurses as a profession, together with the so-called high standards of educative requirement, and the long period of three years as demanded by the legislature at the request of the members of the nursing profession, accounts for the small number of girls applying for training.

Is the present method satisfactory, or would it not be wise to take the young woman from the grammar school, give her two years' intensive training at the bedside, supplemented by book instruction, and then, with hospitals standardized, would not a diploma from such an institution be sufficient without compelling the graduate to pass the State Board of Examination?

College Nursing. Ed. *Nursing Times*, 1916, XII, No. 589.

The following particulars of the College of Nursing, Ltd., are enumerated in the following objects: 1, to organize the nursing profession; 2, to secure state registration for the trained nurse; 3, to make and maintain a register of trained nurses, and by this means to protect the public; 4, to protect the interests of trained nurses;

5, to raise and maintain the standard of training; 6, to establish a uniform curriculum of training and one portal examination; 7, to establish lectureships, scholarships, and in every way to promote the advancement of the nursing profession.

Conditions of registration applicable during the period of grace to existing nurses are as follows: Applicants are required (a) to be at least 21 years of age; (b) to be of good character; (c) to hold a certificate or certificates of three years' training in a nurse training school or schools recognized by the council for the purpose of admitting practicing nurses to the register of the college; or (d) to hold a certificate of not less than two years' training in a nurse training school recognized by the council for the purpose of admitting practicing nurses to the register, followed by at least two years' bona fide practice as a nurse; or (e) to produce evidence of training to the satisfaction of the council, having regard to the date at which the training was taken, followed by at least five years' bona fide practice as a nurse.

Every certificated trained nurse should apply at once for registration by the college of nursing.

Is an Aseptic Operating Room Possible? (La salle aseptique pour opérations est-elle réalisable?) Dr. H. C. Richter. *Rev. d'hygiène*, Paris, 1916, XXXVIII, No. 1.

There are four causes which play a part in introducing harmful germs into the operating room: 1, the personnel (the surgeon and his assistants) as carriers of dust; 2, the patient; 3, the necessary objects (tables, instruments, etc.); 4, the external air as a carrier of dust and germs. For the first two causes it is the duty of the surgeon to take the necessary precautions. With regard to the two latter causes, the author puts up the following postulates: 1, the operating room must have no communication with the external air; 2, only the strictly necessary persons must be admitted to the operation; 3, the operating room must be ventilated only with sterilized air; 4, it must be sterilized immediately after each operation; 5, all movable objects must be sterilized.

To realize these postulates, the author demands that the operating room communicate only with a completely sterilized room, where the instruments, dressings, etc., are kept ready. This room forms the first zone of protection. A second zone of protection is formed by rooms which communicate with the outside (wardrobe, anesthesia room, etc.) These rooms are kept strictly clean.

The operating room should be at least 6 meters long, 5 meters wide, and 5.50 meters high. The windows, looking toward the north, should be slanting above and have no horizontal portion; they should be double, with an interval of about a meter between the external and internal panes. This prevents a change of temperature and the deposition of watery vapor on the panes. The space from which the students watch the operation should be completely shut off by window panes. For lighting the room the author would use two electrical luminous tubes (Moore system) placed in the interspace between the inner and outer window. This would secure the same light night and day.

The Children's Clinic of the Municipal Hospital at Amsterdam (De kinderkliniek van het binnengasthuis te Amsterdam). Dr. J. E. Stumpff. *Ziekenhuis*, Amsterdam, 1916, VII, No. 7.

This new clinic consists of two three-story buildings, one behind the other, with a connective middle structure. The first building, fronting on the street, contains the ad-

ministrative services. Corridors on each floor connect the two buildings. On each side of these corridors are the rooms for the nurses. Each floor of the rear building is divided into two large wards. The first floor forms the observation or isolation division, modeled after that of the Hospital Pasteur in Paris. Along the wall of these large halls are glass boxes reaching from the floor to the ceiling and closed in front by glass doors. These boxes are 2 meters wide, 3 meters deep, and 4.5 meters high. Each box has a heating radiator, an open-air window, electric light, and an electric ventilator. Children entering the hospital are placed in these boxes for about twenty days. After this observation period they are removed to the general wards if they are found to be free from infectious diseases.

Conditions of the Hospitalization of Children; Prevention of Hospital Infection, Especially in Infants' Wards; Results of the Box System at the Herold Hospital (Les conditions d'hospitalization des enfants; prophylaxie de la contagion hospitalière, spécialement dans les salles de nourrissons; résultats du système des boxes à l'hôpital Hérod). Dr. Barbier. *Bulletins et mém. de la Société méd. d. hôp. de Paris*, 1916, XXXII, No. 19.

The mortality of children in hospitals does not only depend on the severity of their individual disease, nor on their power of resistance, but also on the prevention of hospital infection. Hospital statistics must, therefore, take account of the deaths due to the diseases for which the children were received into the hospital and those due to hospital infection. If the mortality due to the latter cause is very low or very high, it will indicate that the conditions of the hospital are either good or bad. Theoretical views of preventing hospital infection have little value; success depends entirely on the manner in which the means of prevention are applied in practice and on the conscientiousness with which they are applied. For this purpose a permanent, educated, and well-trained nursing personnel is necessary, and this is unfortunately not found in French hospitals.

The fundamental principle in the hospitalization of children is the box system. It prevents crowding of the wards and direct infection from patient to patient. There should be only one bed in each box, but unfortunately circumstances made it necessary at the Herold Hospital to place, in some cases, two patients in one box. The sterilization of bed clothing is of highest importance. By demanding strict sterilization of all bed clothing, the author was able to prevent almost completely all cases of skin diseases, especially those of the scalp. When seven such cases suddenly appeared, it was found that two new nurses had neglected this rule of the hospital.

From 1909 to 1913, 1,238 patients were received in the infants' division of the Herold Hospital. Of these 442, or 35 percent, died. But if the patients who died within twenty-four hours after their arrival (4) and those that died from tuberculosis (129) are subtracted, the mortality is only 309, or 27.9 percent. Among the 1,105 children who recovered, all the diseases of infancy are represented, as bronchopneumonia, meningitis, syphilis, etc.

Plans for a Methodist hospital to be erected at Memphis, Tenn., by the Memphis, North Arkansas, and Mississippi conferences have been accepted, and construction work was expected to be started in November. The plant will consist of a seven-story main building, with a five-story wing at each end and two such wings at the rear. The frontage of the main building will be 200 feet and the length of each wing 124 feet. The hospital is designed to accommodate 300 patients, and will have eight operating rooms. John Gaisford, of Memphis, is the architect.

INDEX OF HOSPITAL AND SANATORIUM LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature,
Army Medical Museum and Library, Office of the Surgeon-General,
United States Army.

Aikens, Charlotte. Clinical Studies for Nurses. 3d ed., 565 pp., 8vo. Philadelphia and London, W. B. Saunders Co., 1916.

Baker, Josephine. The Possible Reduction of Mortality Among Subnormal Institutional Babies. Trans. Am. Assn. Study and Preven. Inf. Mortality. Baltimore, 1916, VI, pp. 244-251.

Barbier, H. Conditions of the Hospitalization of Children; Prevention of Hospital Infection; Results of the Box System at the Herold Hospital (Les conditions d'hospitalisation des enfants; prophylaxie de la contagion hospitalière; résultats du système des boîtes à l'hôpital Hérold). Bull. et mém. de la Société d. hôp. de Paris, 1916, XL, No. 19.

Bichelonne and Mouriquand. Surgical Ambulances Near the Front of the Armies (Ambulances chirurgicales proches du front des armées). Arch. de méd. et pharm. militairés, Paris, 1916, LXV, No. 4.

Briggs, L., and Stearns, A. Recent Extension of Out-Patient Work in Massachusetts State Hospitals for the Insane and Feeble-Minded. Proceed. Am. Med.-Psychol. Assn., Baltimore, 1916, XXII, pp. 203-212.

Dewey, R. The Development of Detached Wards at the Kankakee State Hospital (1880-1890). The Genesis of the Movement for Segregated Construction. Proceed. Am. Med.-Psychol. Assn., Baltimore, 1916, XXII, pp. 189-202.

Faure, J. L. The Ocean Hospital at La Panne (L'ambulance de l'Océan "La Panne"). Presse médicale, Paris, 1916, No. 29.

Flaig. The Sanatorium for Alcoholics, "Haus Burgwald," near Niederarmstadt, in 1914 (Die Heilstätte für Alkoholranke, "Haus Burgwald," bei Niederarmstadt, in 1914). Alkoholfrage, Berlin, 1915, XI, p. 366.

Flint, J. M. The Organization and Problems of a War Hospital. Mil. Surgeon, Washington, 1916, XXXVIII, No. 4.

Florand, A. A Year's Service in the Contagious Division at Val de Grace (Une année au service des contagieux du Val de Grace). Bull. et mém. de la Société méd. d. hôp. de Paris, 1916, XL, No. 21.

Frost, H. P. Occupation of Patients. Proceed. Am. Med.-Psychol. Assn., Baltimore, 1916, XXII, pp. 305-310.

Gateau, G. On the Beauty and Usefulness of the Profession of Nursing (Sobre la belleza y utilidad del papel de enfermera). Report de med. y cirug., Bogota, 1916, VII, No. 8.

Gaucher. Venereal Diseases at the Villemin Military Hospital During the War (Les maladies vénériennes pendant la guerre à l'hôpital militaire Villemin). Ann. d. maladies vénér., Paris, 1916, XI, No. 4.

Getchell, A. C. A Year's Work of a Local Tuberculosis Hospital. Boston Med. and Surg. Jour., 1916, CLXXV, p. 229.

Gradenwitz, A. A Model Hospital Train; Describing the Completeness of the Bavarian State Hospital Train. Scient. American Suppl., New York, 1916, CXIV, p. 664.

Hamilton, E. A. Experiences in a German Reserve Hospital Under the Auspices of the American Red Cross. Mil. Surgeon, Washington, 1916, XXXVIII, No. 5.

Hess, A. F. Institutions as Foster Mothers for Infants. Trans. Am. Assn. Study and Prevent. Inf. Mortality, Baltimore, 1916, VI, pp. 255-278.

Hitchcock, J. S. The Massachusetts Tuberculosis Dispensaries and Their Relation to the Practicing Physicians. Boston Med. and Surg. Jour., 1916, CLXXV, pp. 225-228.

Jolly, C. On the Hospitalization of Tuberculous Soldiers (Sur l'hospitalisation des militaires tuberculeux). Jour. de méd. de Bordeaux, 1916, XLVI, No. 5.

Kraepelin, E. A Psychiatric Research Institute (Ein Forschungsinstitut für Psychiatrie). Zeitschr. f. d. gesamte Neurol. u. Psychiat., Berlin, 1916, XXXII, No. 1.

Kruse, P. The German Sanatoriums for Alcoholics (Die deutschen Trinkerheilstätten). Alkoholfrage, Berlin, 1915, XI, p. 275.

La Fetra, L. E. The Hospital Care of Premature Infants. Arch. Pediat., New York, 1916, XXIII, No. 5.

Landis, H. R., and Kelly, T. C. Pre- and Post-Natal Work from the Phipps Institute and the Babies' Hospital. Internat. Clinics, Philadelphia, 26 s., II, pp. 211-222.

May, J. V. Some of the More Recent Problems Connected with the State Care of the Insane. Proceed. Am. Med.-Psychol. Assn., Baltimore, 1915, XXII, pp. 179-187.

MacLaurin, C. From a London War Hospital. Med. Jour., Australia, Sydney, 1916, III, p. 393.

Reno, W. W. Laying Out a Field Hospital. Mil. Surgeon, Washington, 1916, XXXIX, 156-161.

Sachs, T. B. Chicago Municipal Tuberculosis Sanitarium. The Municipal Control of Tuberculosis in Chicago. City of Chicago Municipal Tuberculosis Sanitarium, Its History and Provisions, Chicago, 1915, 96 pp., 8vo.

Sanders, Georgiana. Modern Methods in Nursing. 900 pp., 8vo. Philadelphia and London, W. B. Saunders Co., 1916.

Steindler, A. Orthopedic Department at State University Hospital (Iowa). Am. Jour. Care Cripples, New York, 1916, III, No. 1.

Thomson, D. G. A Descriptive Record of the Conversion of a County Asylum into a War Hospital for Sick and Wounded Soldiers in 1915. Jour. Mental Science, London, 1916, LXII, pp. 109-135.

Triboulet, H. The Service in the Convalescents' Divisions in Children's Hospital in 1916 (A propos des services de convalescence des hôpitaux d'enfants en 1916). Bull. et mém. de la Société d. hôp. de Paris, 1916, XL, No. 17.

Vincent, W. Use of Asylums as Military Hospitals. Jour. Mental Science, London, 1916, LXII, pp. 174-178.

Woodson, C. R. A Plea for a Merit System and Civil Service in Our Eleemosynary Institutions. Jour. Missouri Med. Assn., St. Louis, 1916, XIII, No. 7.

Miscellaneous.

The Garibaldi Hospital at Melito Porto Salvo. Nipiologia, Napoli, 1915-16, I, No. 2.

The Grand Priory of the Order of the Hospital of St. John of Jerusalem in England. Annual Report of the Indian Branch for the year 1915, fol., Calcutta, 1916.

—

The City of Miami, Fla., has invited bids on the erection of a new building for the Miami City Hospital.



Conducted by MISS ANNIE W. GOODRICH.
Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

The Value of a Course in Household Economics in the Training School¹

LINETTE PARKER, B. S., R. N., Teachers College, Columbia University.

Before attempting to discuss the value of a course in household economics in the training school, I want to have clearly in mind the subject matter of such a course. I do not offer this as a teacher's outline, but have simply arranged briefly the material for the convenience of this discussion.

1. PLAN AND CONSTRUCTION OF A BUILDING.—This would involve a brief discussion of the value of the proper arrangement of rooms, of the relation between the various departments of the household, the cost of their maintenance, and discussion of systems of light, ventilation, heat, refrigeration, plumbing, and vacuum cleaning, and the conditions that would be necessary to keep them in good order.

2. DECORATION.—Some principles of interior decoration and the therapeutic value of colors and of artistic arrangement can be considered here.

3. EQUIPMENT.—This topic includes the *reason* for the selection of certain types of furnishings and the *cost* of furniture, rugs, blankets, linens, and of the working utensils for the various departments.

4. CARE OF THE HOUSE AND EQUIPMENT.—Under this heading belong (1) cleaning processes and cleaning agents for woods, metals, enamelware, porcelain, paint, etc., (2) the removal of stains from fabrics, woods, marble, porcelain, etc., (3) care of plumbing and its repair, (4) renewal of damaged or worn-out material, (5) prevention of pests, (6) disposal of garbage and waste. This is the part of housework which is generally looked on as drudgery, but an intelligent performance of these processes makes for real cleanliness, sanitation, economy, and efficiency.

5. LAUNDRY.—I think no nurse needs to know intimately all the processes of washing, bleaching, bluing, starching, and ironing of different fabrics unless she is going to take charge of a hospital, but she does need sufficient familiarity with the laundry to understand how much labor is involved and what a large item it is in the cost and life of a hospital.

The value of the first three topics just given, The Plan and Construction, Decoration, and Equipment, perhaps does not seem so practical to some, but I know of no better way to help a nurse adjust herself to the problems of an

institution and to impress on her the money value of the property which she is to use and care for during her training and later nursing work. Something definite needs to be done to instill into every nurse a sense of personal responsibility in the care and preservation of other people's property.

When they appreciate the value of furnishings and utensils, the next step is for them to know the right way to care for them. There is a right way and a wrong way to sweep a room; there is a right way and a wrong way to clean a white enamel bed; there is a right way and a wrong way to clean a lacquered surface.

The majority of young women nowadays scorn housework and are not taught it in the home. When they come to the training school, they do not know the proper methods of cleaning or the best agents; they do not know how to remove stains from fabrics, and often cannot properly care for a room. Such duties as these cannot be separated from nursing; in fact, they are fundamental, for good nursing means cleanliness to the last degree.

The patient is often too sick to allow a maid to clean the room, and under these circumstances the nurse should know the quickest, quietest, and best methods of sweeping and dusting. The family bath room is often the nurse's work room, and she must know how to care for the plumbing and various fixtures. The nurse should be responsible for the removal of all stains from linen used in the sick-room before it goes to the laundry.

How many sad tales are told like these, "That nurse spotted my mahogany table," "A nurse ruined my brass bed," "My last trained nurse stained my best blankets." We are told of families which actually dread to have a trained nurse come into the house because of some unfortunate experience with one who ruined property. In other homes the servants are almost open to rebellion when a trained nurse arrives.

The nurse is, by the nature of her work, a housekeeper, and, if she is not willing or does not know how to do her part in the machinery of the household, something is surely going wrong. These are facts which the training school must face. When these unfortunate things happen, the nurse may be careless, to be sure, but has she been taught to do any better?

A superintendent may say that her nurses learn these things on the wards as they come up in the daily routine work. Are you sure that each nurse becomes familiar with all the processes? Are all head nurses qualified to teach the right methods and the reasons for them? Is it economy for an assistant or head nurse to show ten different nurses at ten different times a process which could be taught to the group? It seems to me that organized instruction in housework at the very beginning of the probationary period saves the time of heads of wards, saves property by avoiding damage through ignorance, and makes very materially for the efficiency of the individual nurse.

I think a course in household economics at the beginning of the training helps to show the fundamental importance of housekeeping in relation to nursing. Every possible means should be taken to exalt housework in the eyes of the nurses. Do they know that at least two universities in this country are giving degrees in household arts, and that young women spend four years in studying the various arts and sciences allied to housework? Get the best educated woman obtainable to teach this course in the training school. Have the ward work arranged so that *all* the nurses, and not merely the probationers, shall

¹Read at the annual meeting of the New York State League for Nursing Education, October 17, 1916.

have some part in the housekeeping of the ward. I do not blame probationers for hating to clean when they have it all to do and the seniors look on in a somewhat haughty manner.

It would be of incalculable value if one of the lady managers, or the wife of one of the managers or trustees of the hospital who is herself a good housekeeper, would talk to the nurses of her experience, or, even better, take them to her home and show them just what housekeeping means in a good home.

Most hospitals have the greater part of the housework done by maids, but there has to be a certain amount of cooperation between the nurses and maids. If the nurses know how the maids' work should be done and what it all means, the cooperation is real and not perfunctory, and any supervision on the part of the nurses is intelligent. We all admire a man who, to attain the mastery of some business, begins at the bottom as a laborer and works on up through every department. He is then in a position to cooperate with all the heads of departments and to supervise in any particular of that business. If the nurse has been in the laundry and becomes familiar with the problems there, she will think a little of the conditions in which she sends clothes from the wards. If she has been in the kitchen and has seen the problems of that department and the cost of materials, she will be more considerate of service and less wasteful.

The hospital provides the best laboratory for a course in household economics that could be wished for. In some training schools the probationers take the entire care of their rooms; in one each class thoroughly cleans one ward, cleans an ice box and a stove in a ward kitchen; in one school each nurse has a certain period—two weeks, I think—in the laundry and assists in removing stains and in other processes; in another the nurses must remove all stains from linen in the ward before it goes to the laundry. This is all most practical experience.

Besides these general topics which have been mentioned, there also belongs to a course in hospital economics in the training school talks concerning the customs and regulations in the particular school where the course is given, description of the general organization and duties of the staff and like subjects of local importance, and, under the use of equipment, explanation of the call and telephone systems there in use.

I would, then, summarize the value of a course in household economics in the training school as follows:

1. It helps a nurse to adjust herself to the requirements of the particular hospital and to the general conditions of an institution.
2. It instills the appreciation of the value of property.
3. It gives the nurse at the very beginning correct methods of cleanliness in all the phases of hospital and private nursing.
4. It makes for better cooperation between nurses and employees.
5. It fits a nurse for intelligent supervision of household service.
6. It impresses on her the fact that household duties cannot be looked down on, because the best nurse is essentially a good housekeeper.
7. As a seventh point I will add one not before mentioned—that the more a nurse knows and cares about the cleanliness and good condition of the household in which she lives, the better equipped she will be for good womanhood in whatever field she enters after her training as a nurse.

Teaching of Ethics in Schools of Nursing¹

CAROLYN GRAY, R. N., Superintendent of Nurses City Hospital, Blackwell's Island, New York City.

Ethics has long occupied a place in our training school curriculum, but only in the past few years has it been considered a subject of much importance. As formerly taught, the course was composed of a few lessons which centered about professional etiquette. The pupils were given instruction as to their deportment in the hospital and the home. The teacher who saw in it an opportunity for the development of character or forming of high ideals was an exception.

Since the field of nursing has broadened from that of only private duty to that larger one which embraces public health nursing, school nursing, rural work, and many other branches, the training school has found it necessary to prepare young women to meet the ever-growing demands made by these new fields. Young women with vision, with charity, with good judgment are needed. It has been a problem to know just what course to pursue to bring out and strengthen these intangible qualities.

A study of the curriculum gives us little encouragement. The only subject there that could be used as a basis for character development is ethics, and even that in the past has not served this purpose to any great extent. It is evident that if we wish it to serve us now, we must ask ourselves very carefully, "What is our purpose in teaching it?" and, "How shall we present it so that it will function in the lives of our pupils?"

There seems to be a great difference of opinion regarding the value of ethical teaching, even among professors of ethics. From the many books on this subject which I have studied, perhaps the clearest impression left on my mind is that *not* the teaching of ethics, but the *lives* of those with whom we are associated help to shape *our* characters.

A noted teacher of the subject says,² "To some people the shaping ideals of what character should be, often held unconsciously, come from the books they read; but to the majority they are given by the persons whom they most admire before they are 20 years old." And again, "The greatest thing any friend or teacher can do for a student is to furnish him with a personal ideal." In this connection he reminds us that it took a life, not theories, to furnish us with Christian ideals.

Following this same idea, another educator states,³ "The chief positive generator of disposition in general, and particularly of kindness, is what the modern psychologist calls suggestion, which is largely identical with the good old idea of example. The child is a *psychic chameleon* (and no one ever fully outgrows the nature), and takes his tone from those about him; whatever you desire in your child, have that in yourself; this is the deepest educational principle, and a wonderfully beneficent one to the educator also, for it spurs him to new moral achievement for the sake of his protegee. The law of example is the scripture, 'Give and it shall be given unto you; full measure, shaken down, pressed together, running over,' or, again, in adapted phrase, 'Whatsoever ye would that your child be to you, be ye even so unto him.'"

If these assertions are accepted, then the personality and example of the teacher are of the highest importance. While this increases the teacher's responsibility, it also adds dignity to her position, and proves the far-sighted wisdom of those who inaugurated the movement for the

¹Read at the annual meeting of the New York State League for Nursing Education, October 17, 1916.

²G. H. Palmer, Ph. D., Harvard University.

³Edward O. Sisson, Ph. D., professor of education, University of Washington.

scientific preparation of teachers for training schools. The teacher, however, shares her responsibility with the other members of the faculty and the heads of the various departments in which pupil nurses receive their training. In addition, we are warned that it is not possible to teach ethics successfully in an unethical atmosphere. Ethics is defined as the science of conduct in so far as this is considered right or wrong. Our aim in teaching ethics is to agree on a definition of right and wrong, and stimulate our pupils to choose the right in preference to the wrong. If the conditions under which the pupils live and work suggest that the dominant ideal of the controlling powers is a "square deal" for the representatives of the seemingly conflicting interests found in the hospital, then the whole system of management will serve as a practical demonstration of the possibility of solving difficult problems according to ethical principles.

Early in the study of our problem one meets the question of when to begin the class work in ethics. The underlying principle is that pupils should be confronted with problems before they are invited to solve them. The problems begin with the probationer and continue all through her school life; in fact, all of her professional life bristles with them. Accordingly, the teaching of ethics should begin with the probationer and continue through the period of training. The study of ethics should not, however, terminate then, because connection with the various nursing organizations will furnish opportunity for further application of ethical principles.

After much study and many trials, I feel that the best suggestions I can offer are as follows: start your classes in ethics early in the probation period. Try to make them informal, and emphasize your sympathy with the pupils and their difficulties. A friendly, helpful attitude on the part of the teacher is essential. A vivid imagination and keen recollection of the difficulties of her own probation will do much to help the teacher put herself in the pupils' place and develop a live interest in their problems. It would be appropriate to open the first class by reading an incident involving some ethical point. History, biography, and the daily papers furnish an inexhaustible fund of just such material.

For instance, the story of Robert Gould Shaw and his leadership of the negro troops in the attack on Fort Wagner during our Civil War is always thrilling, interesting, and apt to provoke discussion. "Robert Gould Shaw was one of the many Harvard graduates who enlisted at the first call of President Lincoln. Toward the end of the war the plan of organizing regiments of negroes was tried, and the command of one of these regiments was offered to Shaw. It was a task made doubly hard by the uncertainty of the discipline and courage of untried negro soldiers, by the natural abhorrence of the South toward regiments of their own escaped slaves, and by the almost certain death to which the commander of such a regiment was exposed. To Shaw it was harder because at this time he was on the eve of marriage. For two or three days he hesitated, and even sent a message through his father to Governor Andrew that he could not accept because he was not equal to the task. But before his father had had time to deliver the message, Robert Shaw telegraphed him to withdraw it—he had decided to go. He wrote to his family that he thought he had decided rightly. 'While I was undecided I had the feeling as if I were cowardly,' he said. He was killed at the disastrous assault on Fort Wagner, and his body was thrown into the trench among the negroes." Was his choice right? There will probably be

differences of opinion just as there were at the time of his death.¹

The lessons in ethics should be built around similar biographical sketches in such a way that instances of loyalty, courage, truth, honor, justice, etc., will enable the class to formulate definitions of these words that they are willing to accept (both individually and collectively) and try to live up to. Discussion of these sketches will probably bring out the principle around which the teacher wants to build the lesson. If she is skillful and encourages all of the pupils to take part in developing the discussion, she can gain a general knowledge of their ideals, at least enough to furnish an appreciative basis for future classes.

The next step is to show that ethical problems or questions of right and wrong similar, for instance, to those that troubled Florence Nightingale, arise in the life of each pupil nurse, and her ultimate character is determined by her solution of the problems and the choice she makes.

Fortunately, we have biographies of men and women (many of our profession) which exemplify just the ideals we wish to instill. Assign portions of different biographies to each pupil, selecting such portions as will illustrate the points you wish to emphasize. "The History of Nursing," "The House on Henry Street," the life of Florence Nightingale, of Elizabeth Fry, of John Howard, of Jane Addams, of Isabel Hampton Robb, furnish incidents of absorbing interest.

With these suggestions in mind, the following subjects are discussed in ten one-hour classes.

NURSING AS A PROFESSION.—Aims and ideals of today.

DEFINITIONS.—Ethics—nursing ethics; qualities, as honor, loyalty, conscientiousness, tact, sympathy, truthfulness.

PREPARATORY TERM.—(1) Qualities needed—determination, courage; (2) forming of right ideals.

CONDITIONS OF ACCEPTANCE.—Conduct; personality; adaptability.

RELATION OF STUDENTS TO—Classmates, seniors, graduates, faculty, doctors, visitors, employees, "esprit de corps."

NIGHT DUTY.—Qualifications for success.

OUTSIDE INTERESTS.—Opportunities and necessity for enlarging knowledge.

GOVERNMENT.—Military discipline, self-government, principles of same, "students' council," "house customs," "hospital regulations," observance.

Some may question the propriety of including "government" in an outline on ethics, but the time to inculcate principles of self-government is all too short, and the success of self-government depends largely on the ethical attitude of the pupils. Even such an authority as Professor John Dewey, of Columbia, warns us not to be surprised if the child who is governed by a master develops into the citizen who is willing to be arbitrarily ruled by a political boss. Does not this principle work out just as truly when applied to nurses?

THE HIPPOCRATIC OATH.—Origin and history, application to medicine, similar application to nursing.

MODIFIED VERSION OF HIPPOCRATIC OATH.—You do solemnly swear, each one by whatever she holds most sacred, that you will be loyal to the physicians under whom you shall serve, as a good soldier is loyal to his officers; that you will be just and generous to all worthy members of your profession, aiding them when it shall be in your power to do so; that you will lead your lives and practice your profession in uprightness and honor; that into what-

¹Harvard Memorial Biographies, vol. II, p. 203.

soever house you shall enter, it shall be for the good of the sick to the utmost of your power, and that you will hold yourself aloof from all temptation; that whatsoever you shall see or hear of the lives of men and women, whether they be your patients or members of the household, you will keep inviolately secret, whether you are in other households or among your own friends. If you accept these obligations, let each one bow the head in sign of acquiescence. And now, if you shall be true to your word, may prosperity and good repute ever be yours; the opposite if you shall prove yourself forsworn.

My justification for including the Hippocratic oath is that on analysis it proves to be an epitome of the ethical principles we are striving to formulate, and that the daily trying to live up to it is fitting preparation for taking it on graduation.

This outline is at best a tentative one, intended to cover the points which should be discussed, though not necessarily in the order given, as one should be guided more or less by the problems the pupils raise and the trend of the discussions.

Early in the junior course give a few lessons, at least ten—better still, twenty—in psychology as a continuation of the study of ethics. I know full well the feeling which comes over the principal of a nursing school when anyone advocates the addition of a new subject to the curriculum. I look upon the teaching of elementary normal psychology, however, not as an additional subject, but as a useful tool, or, if you will, as a peg on which to hang lessons in ethics.

Bear with me if I remind you that many of our pupils are young and highly impressionable, and the educational standard of New York state is low—only one year in high school. We are anxious that these pupils should accept and incorporate into their lives the highest ideals of life and of our profession; that they should form correct habits of self-control; that they should gradually learn to control others; and that they should recognize and make allowance for abnormal mental conditions—not a small order by any means. Psychology teaches the how and why of habit, helps one to develop self-control, to govern others, and to make allowance for differences of opinions, beliefs, etc.

In one instance a class was started by the teacher inviting the pupils to give their ideas of the meaning of psychology. An interesting half hour was spent in discussing these various ideas, as many were far removed from a correct conception. Then the teacher undertook to explain what psychology really is and in what ways it might be of service to nurses. She raised many interesting questions for the class to consider, and, in turn, invited them to write out questions or problems which, from what she had told them, they felt might be answered by psychology. These questions were kept until such time as the pupils' advancement permitted them to find their own answers. You may be interested in some of the questions:

"How can I teach a child to correct bad habits?" "How can I form the habit of getting up early in the morning?" "What method of instruction would insure the best care for a baby about to leave the hospital with an ignorant, but well-intentioned, mother?" "How would you account for ardent likes and dislikes?" "What would you do to make a baby like its bath?" "How can we overcome the dislike some babies and adults have for baths?" "How could we obtain the active cooperation of an intelligent patient on diabetic diet?"

These questions indicated a wholesome dissatisfaction with a routine method that accomplished results regardless of the patients' attitude or feelings.

The topics discussed in the classes were as follows:

All Acts of Living Beings and Changes in Physical and Mental Conditions, the Results of Forces Acting Upon the Organism.—Stimuli, responses; will, the release of energy in acts; individual differences.¹

Responses Follow Stimuli, Not at Random, But According to Connections Between Stimuli and Responses Formed in Accordance With Certain Laws.—Physiological basis of connections between stimuli and responses; nervous system and its functions; law of multiple response; law of readiness.

Inborn Connections.—Instincts; typical instincts; overlapping of instincts; delayed and transitory; inborn connections due to heredity, racial, and family traits; variation, individual peculiarities; modifying inborn connections.

Perhaps there has never been a time in the world's history when the need for tolerance was greater than today. This lesson serves to give a broader viewpoint, and tends to make the pupils more generous in their judgment of others.

Learned Connections—Habit.—Law of effect; law of use and disuse; minor laws; the progress of learning.

This was a most interesting lesson, and stimulated the whole class to test the principles governing habit formation.

General Conditions Affecting Connections.—Fatigue, illness and injury, emotions, drugs.

Individual Differences.—Distribution of differences; central tendency and variation; causes of differences; types of differences.

Special Applications of Psychology to Nursing.—Controlling conduct—supplying the stimulus to call forth a desired response, suggestion; observation of people, self-control.

Everyone will agree that this is only a meager introduction to the subject of psychology. The class referred to advocated an increased number of lessons and more thorough treatment of such an interesting subject.

After the lessons suggested have been given, the best continuation of ethical teaching is represented by conferences between the faculty and pupils over daily problems. Some of these problems will demand personal conferences—others can be treated in informal talks following the outline suggested in Miss Parsons' splendid book, "Nursing Problems and Obligations." In my study of this subject I have found a number of books that I think might profitably be added to our reference libraries. One valuable one is R. C. Cabot's "What Men Live By." Dr. Cabot argues that work, play, love, and worship are the most important activities of life. Possibly it would prove profitable to measure our schools by his standards. There is no lack of work. Can the same be said of play? Do we meet with the same cooperation in our plans for social life for nurses as in our plans for work that they should do? The third order is a large one, and the best we can do is to make our pupils feel that we have a very human and close interest in their welfare. The last seems to me important, as even the most unorthodox will agree that worship has an unlifting influence, and, however desirable the spirit of doubt may be from a scientific standpoint, the period of training is a most inopportune time to foster it. I believe pupils should be encouraged to attend a church of the same denomination as their home church. Life in a hospital shatters many illusions, undermines many beliefs, but thoughtful students eventually find they have sacrificed

¹Outline furnished by Miss Dorothea Romer, A. B., assistant in educational psychology, Teachers' College, Columbia University.

a narrow interpretation of life for a broader, deeper, richer, and more human outlook.

Other books of practical value are "Character Training," by Mrs. Ella L. Cabot; "Everyday Ethics," by the same author; three by Hugh Black, "Friendship," "Work," and "The Open Door;" "Education and Ethics," by Boutroux; "The Teacher," by George Herbert Palmer; Emerson's "Essay on Compensation;" "Moral Principles in Education," by Professor John Dewey; "The Essentials of Character," by Professor Edward O. Sisson; "Ethics in the School," by Ella Flagg Young; "Manual of Ethics," by Mackenzie; James' "Psychology," especially Chapter X; "Essentials of Psychology," by Pillsbury; "Human Behavior," by Colvin and Bagley; "Psychology of Thinking," by Miller; "Diseases of the Will," by Ribot, and "Education of Self," by Dubois.

There are many others, some of which may be better than those I have mentioned, but which I have not had an opportunity to examine.

In closing, let us note again what it seems to me are the important points in the teaching of ethics: (1) a wise choice in the selection of teachers; (2) the importance of example; (3) the necessity of an ethical atmosphere; (4) the value of class discussions of problems involving choice; (5) the need of an introductory course in psychology; and (6), the help derived from personal conferences between the members of the faculty and the senior pupils.

One last word. If, after all our efforts, some of our pupils disappoint us, have we any right to expect to escape the fate of even the greatest of teachers?

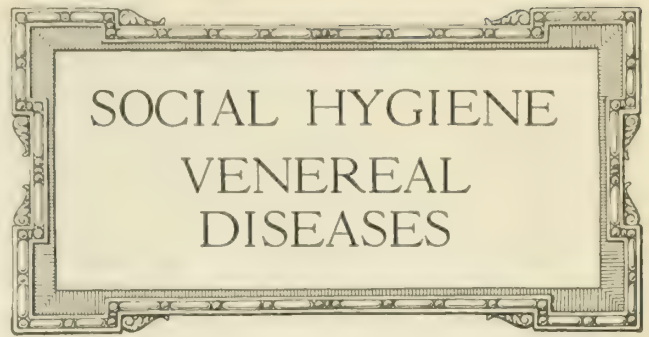
New Visiting Nursing Plan

A Public Health Nursing Association recently formed in Peoria, Ill., is advocated by the Illinois State Board of Health as a model for other cities. The Peoria association combines and centralizes all the visiting nurses of the city. Instead of working independently, often overlapping, the different organizations and associations which are interested in any line of nursing under the new plan will so cooperate that the work will be centralized in one office. All nurses will work under the direction of a superintendent, and all records will be filed at the central office in regular form. The new organization has a board of forty-five directors, twenty-four of whom are representatives of associated organizations.

California Raises the Standard

The California State Board of Health has adopted new regulations governing the certification of nurses, which will require that after September 1, 1918, every candidate for admission to a nurses' training school must present a high school diploma and evidence of having taken four years of English, one year of chemistry, one year of biology, and two years of hygiene, sanitation, and household arts. Not until the candidate has met these conditions of entrance and completed the further course of training outlined by the board will she have the right to use the title, "registered nurse."

Miss Edith Weller, R. N., formerly of Tacoma, Wash., and more recently superintendent of the Montesano City Hospital, Montesano, Wash., has been appointed superintendent of the new Bartholomew County Hospital at Columbus, Ind., which will be opened about December 1. Miss Weller has been at the new hospital for some time, looking after the installation of equipment. The building cost about \$100,000, and is said to be one of the most up-to-date county hospitals in the country.



Conducted by WILLIAM F. SNOW, M. D.,

General Secretary, The American Social Hygiene Association.

Please address items of news and inquiries regarding Social Hygiene to the editor of this department, 105 West Fortieth street, New York City.

Clinics for Venereal Diseases—Why We Need Them— How to Develop Them¹

BY WILLIAM F. SNOW, A. M., M. D., General Secretary The American Social Hygiene Association.

I

The venereal diseases are so prevalent, so insidious in their attack, and so indirect in methods of maiming and killing their victims, that the public is still without an organized defense against them. The continuance of this state of unpreparedness is favored by the complicated relations between the medical and moral aspects of their eradication. For the purpose of this symposium it is desirable to present the case for venereal diseases as a preventive medicine problem, and on the basis of such presentation to emphasize the strategic position held by the dispensaries and hospitals.

TEN SANITARY AXIOMS

Sir Ronald Ross, in his ten sanitary axioms applicable to the prevention of all diseases, holds that, next to the maintenance of the state, it is the duty of scientific government to endeavor to control widespread endemic diseases; that, for economic reasons alone, governments are justified in spending for the prevention of such diseases a sum of money equal to the loss which these diseases inflict on the people, and that in general the money thus spent should be apportioned in accordance with the amount of sickness and mortality caused by each; that it is the duty of governments to make and enforce ordinances required for the prevention of diseases; and it is the duty of the people to comply fully with the provisions of such laws. Other things being equal, that sanitary measure is the wisest which causes the public the least inconvenience, the most practicable which can be administered with a minimum demand on the thoughts, efforts, or compliance of private persons, and the most economical which confers for unit of cost the widest benefits on the public. A suitable expert organization is always required for the prevention of diseases on a large scale, and it is advisable to carry out accurate and repeated measurements of the prevalence of the disease which we propose to prevent, of the cost of the adopted measures, and of the results obtained.

SCIENTIFIC KNOWLEDGE OF VENEREAL DISEASES ADEQUATE FOR ACTION

In the abstract, these axioms are acceptable to the public, but, in their concrete application to the venereal

¹Read at the eighteenth annual conference of the American Hospital Association, Philadelphia, September 26-29, 1916.

diseases, not one of them is in force. Syphilis and gonococcus infections are communicable diseases due to identified organisms; their methods of transmission are known, and a practical laboratory and clinical technic has been worked out for diagnosing each of them; they are widely prevalent throughout the world among individuals of every race, sex, age, and condition of people; they find their chief opportunity for dissemination in the intimate personal contact of infected individuals with other individuals who are susceptible; they are largely, but not exclusively, transmitted through the promiscuous sex relations defined as prostitution, and condemned by society as harmful alike to the health, the morals, and the social progress of a people. Recent methods of therapy make practicable the shortening of the period of infectivity, and improve the chances of ultimate recovery of the patient submitting to early and thorough treatment. Once contracted, they may run their course to practical recovery with or without medical assistance, but under present conditions an unknown and large percentage of those infected never completely regain their health or cease to be carriers, and, therefore, are a continuous menace to society. Syphilis in its early stages is especially a public danger, while in its late manifestations the menace is largely confined to the individual himself. Gonorrhea, on the contrary, while a public danger at all times, is particularly damaging to the individual in its early acute development, and later becomes an insidious danger to those intimately associated with him, especially within his home and family.

THE LINES OF ATTACK THE SAME AS FOR OTHER DISEASES

In a word, we know the cause of these diseases; we know that human carriers afford their chief mode of dissemination; we know that in prevalence and injury to the people they are not outranked by any others of the communicable disease group; and we know that, theoretically, we should proceed to apply these facts exactly as we apply the similar facts concerning other preventable diseases. Reduced to simplest terms, this means the adoption and enforcement of (1) measures for the discovery, treatment, and control of individuals already infected, (2) measures for the elimination of conditions of environment favoring the dissemination of the infection, (3) measures for the protection of individuals not yet infected. In practice the application of such measures is exceedingly difficult, and cannot proceed more rapidly than the formation of public opinion on the importance of eradicating these diseases.

EARLY DIAGNOSIS FAVORS SUCCESS BOTH IN TREATMENT AND IN PREVENTION

The need for laboratory examination for evidence of syphilis and gonococcus infections has been one of the first practical measures to obtain public recognition, and facilities for this purpose are being rapidly supplied through health departments and other public or private agencies. Other methods of encouraging the discovery of persons infected are being tried out to a limited extent. Announcements of free advice and treatment service for venereal diseases have been printed in newspapers, posted as signs, and circulated in instruction leaflets. Examinations for evidence of infectious diseases (including syphilis and gonococcus infections) have been requested or required of candidates for employment in many occupations. Regulations requiring the reporting of venereal diseases have been enacted in thirteen states and three cities in other states. Health certificates, whose major requirement is evidence of freedom from venereal disease,

have been demanded by the officiating clergyman or as a state regulation for license to marry. An increasing number of parents are demanding similar evidence as a protection to their daughters in arranging marriage. The army and navy recruiting stations have made their examination for these diseases more rigid, and, after enlistment, failure to report the earliest appearance of infection or even exposure is followed by severe penalties and reduction in pay. Some of our universities are beginning to use the opportunity to protect their students and the homes from which they come by examination for these diseases and treatment of those found infected. Similarly, several hospitals have instituted measures including a Wassermann examination for all patients admitted. An increasing number of physicians are becoming interested in the social aspects of the problem, and are finding it feasible to report cases.

ESSENTIAL TO KEEP PATIENTS UNDER SUPERVISION UNTIL COMPLETION OF TREATMENT

Having discovered through these various agencies collectively a larger number of infected individuals, there immediately arises the demand for adequate treatment facilities. Only a small proportion of these cases can afford to become private patients; for those remaining, proper dispensary and hospital facilities are urgently needed. From the preventive medicine point of view, discovery and initial treatment are useless unless all the detected cases can be kept under treatment until no longer infectious, and can be so controlled in their homes and occupations that measures for the protection of their associates will be carried out. This necessity for treatment facilities is slowly becoming recognized by the public, and here and there encouraging work has begun. Free and pay clinics, with both day and evening services, are being established. Departments of syphilology have been created, and departments for genitourinary, gynecological, and dermatological diseases are giving more attention to the subject. Regulations for discharge of patients, measures for keeping patients under treatment until thus discharged, and during this period active social service follow-up methods, have been devised. While this work is only in its beginning, enough has been accomplished to complete the proof that a practical program exists for the first group of measures for the reduction of venereal diseases—i. e., measures for the discovery, treatment, and control of individuals already infected.

THE OPPORTUNITIES FOR THE CARRIERS TO SPREAD THE DISEASES MUST BE ELIMINATED

The second group—those measures dealing with the elimination of environmental conditions favoring the dissemination of syphilis or gonococcus infections—is largely concerned with the repression of prostitution, since the men and women who practice promiscuous sex intercourse are the human carriers on whom these diseases chiefly depend for transmission. Logically, the red light districts of commercialized vice challenge the attention of health departments, and other forces cooperating in health conservation, as strongly as tenement districts, with their poverty and overcrowding. A new kind of clean-up campaign is being added to those already devised in behalf of the battles against tuberculosis, malaria, hookworm, and other endemic diseases. Ways and means of gradually limiting the commercial gains for manipulation of the supply and demand of prostitution have been demonstrated. The segregated vice district, with medical inspection of prostitutes, has been proved inadequate as a practical

public health measure, and all but two or three among our large cities have abandoned any such policy. The rear room of the saloon and the hotel for transients, which develop arrangements in lieu of the closed vice districts, are slowly being eliminated. The citizens of the residence sections are learning the importance of joining in this new campaign on joint medical and moral issues, and are being equipped with such effective weapons as the injunction and abatement law. As prostitution moves out of the hostile city to country roadhouses and nearby towns in its effort to retain the use of alcohol and the host of other aids to stimulation of the demand, county officials and residents are gradually joining the fight. State and federal forces have also been enlisted in the campaign, especially in limiting the supply. In all of these attacks on venereal diseases through control of environment, the dispensary and the hospital have their opportunity to educate their patients on the social aspects of venereal infections, and to enlist the cooperation of these patients with the health and police authorities. The wide extent to which this invaluable service may be carried out has been demonstrated by the medical and social service staffs of a few institutions.

PERSONS NOT YET INFECTED MUST BE PROTECTED

The third group—measures for the protection of individuals not yet infected—involves another field of opportunity for the hospital and dispensary. Mention has already been made of social service follow-up work applied to venereal disease cases. Undoubtedly through such service much may be done to encourage the most effective prophylactic measure, which is sexual continence outside of marriage. The success of parents and school authorities in promoting sex education, the provision of wholesome recreation facilities for all ages and conditions of people, and the progress of other welfare efforts in establishing normal, happy homes and family life, may also be aided by the dispensary staff.

SEGREGATION OF THE SEXES LIMITS THE OPPORTUNITY FOR VENEREAL INFECTION

The compulsory segregation of the mentally incompetent who cannot control their sexual acts under ordinary conditions of freedom, the military segregation of troops in isolated camps or on shipboard, the segregation of large numbers of laborers in occupations which necessitate living in distant quarters, the enforced segregation of prisoners, delinquents, and charity wards of the state—all the varied social and economic measures by which men and women are separated from each other—reduce the spread of venereal diseases because they restrict for considerable periods of time the freedom of many who are most prone to become carriers when they live in communities where opportunity for promiscuous sexual intercourse exists. The medical and nursing staffs of institutions and hospitals dealing with these classes during their isolation can accomplish an important educational work calculated to have a favorable influence.

MEDICAL PROPHYLAXIS MAY PROTECT THOSE NOT INFECTED

Medical prophylaxis presents an unsolved problem, in which the dispensary particularly can render a great service. There is evidence to indicate that medical measures, intelligently applied by the individual immediately on exposure to infection, have influenced in some degree the reduction of venereal diseases. This is particularly true where it is possible, as in the army and navy, for competent officers to instruct men individually and to enforce a program for prophylaxis. Medical prophylaxis

is more difficult in application to women, and is further complicated by the classes of women to be protected. The prostitute plying her trade under the cheapest, most sordid conditions of the vice district has little time or inclination to cooperate in any prophylaxis program; the clandestine prostitute endeavors to avoid discovery and is difficult to reach with any advice; the inmates of the so-called higher class houses can ill-afford to offend their patrons by refusing those men who are probably infected, or adopting protective procedures best calculated to protect others; the married woman is usually kept in ignorance of danger from her husband who has become infected. It seems apparent from a study of present conditions and limitations that medical prophylaxis can wisely be employed only under the advice of physicians who are fully informed of the circumstances in each case, and have opportunity to observe each individual until the danger of infection has passed. The private practitioner, the dispensary chief, the military surgeons, and the health department official comprise the qualified persons to work out the extent and method of this factor in prophylaxis. Science gives little promise as yet of prophylaxis through practical methods of immunization against syphilis or gonococcus infections.

SUMMARY OF VENEREAL DISEASES AS A PREVENTIVE MEDICAL PROBLEM

To summarize the practical attack on venereal diseases, it may be said that the first line of attack, consisting of the discovery, treatment, and control of infected individuals, should be led by the health departments cooperating with clinics, hospitals, and the private practitioners; the second, comprising the efforts to eliminate environmental conditions favorable to their dissemination by human carriers, must be led by the police departments cooperating with courts, law enforcement agencies, and the citizens; the third, directed toward protecting the uninfected, can best be led by the school departments cooperating with moral and social agencies and the parents. In all the diverse activities of these three major lines of conducting this health conservation battle, there stands out prominently the need for enlisting the forces of the dispensary and the hospital. This is so largely because the association between treatment and prevention is more intimate in this than in any other group of diseases. It is necessary that the members of the medical profession, as well as other leaders of the community, shall frequently review these facts in order that they may have the courage and the persistence to convert this problem from one of the conspicuous failures of public health to the conspicuous success which science has made possible.

[To be concluded.]

The McNabb Hospital at San Diego, Cal., has been closed to the public and will hereafter be operated exclusively for the benefit of inmates of the Fredericka Home, of that city, for whom it was originally intended. The home has recently received a gift of \$200,000 as an endowment, and the income from pay patients at the hospital will no longer be needed. The hospital was built and equipped at a cost of \$40,000, and, although small, is said to be one of the most up-to-date institutions of the kind on the Pacific coast.

Augusta, Kas., is soon to have a modern municipal hospital, and it will be erected without a dollar of cost to the residents of the town in taxes. Augusta is fortunate enough to own some big gas wells, and the hospital will be built from the proceeds of the sale of gas from these wells. A three-story building of brick, stone, and terra cotta construction has been planned. The cost is estimated at \$40,000.

DISPENSARY AND OUT-PATIENT WORK

Conducted by MICHAEL M. DAVIS, Jr.,
Director of the Boston Dispensary.

Please address items of news and inquiries regarding Dispensary and Out-Patient Work to the editor of this department, 25 Bennett street, Boston, Mass.

Dispensary Progress in Chicago

The Central Free Dispensary of Rush Medical College, Chicago, under its progressive superintendent, John E. Ransom, is about to open an evening clinic for the study and practice of industrial medicine and surgery. This is the third clinic of its kind which has recently been established by leading institutions in the country, that of the Massachusetts General Hospital in Boston, under the

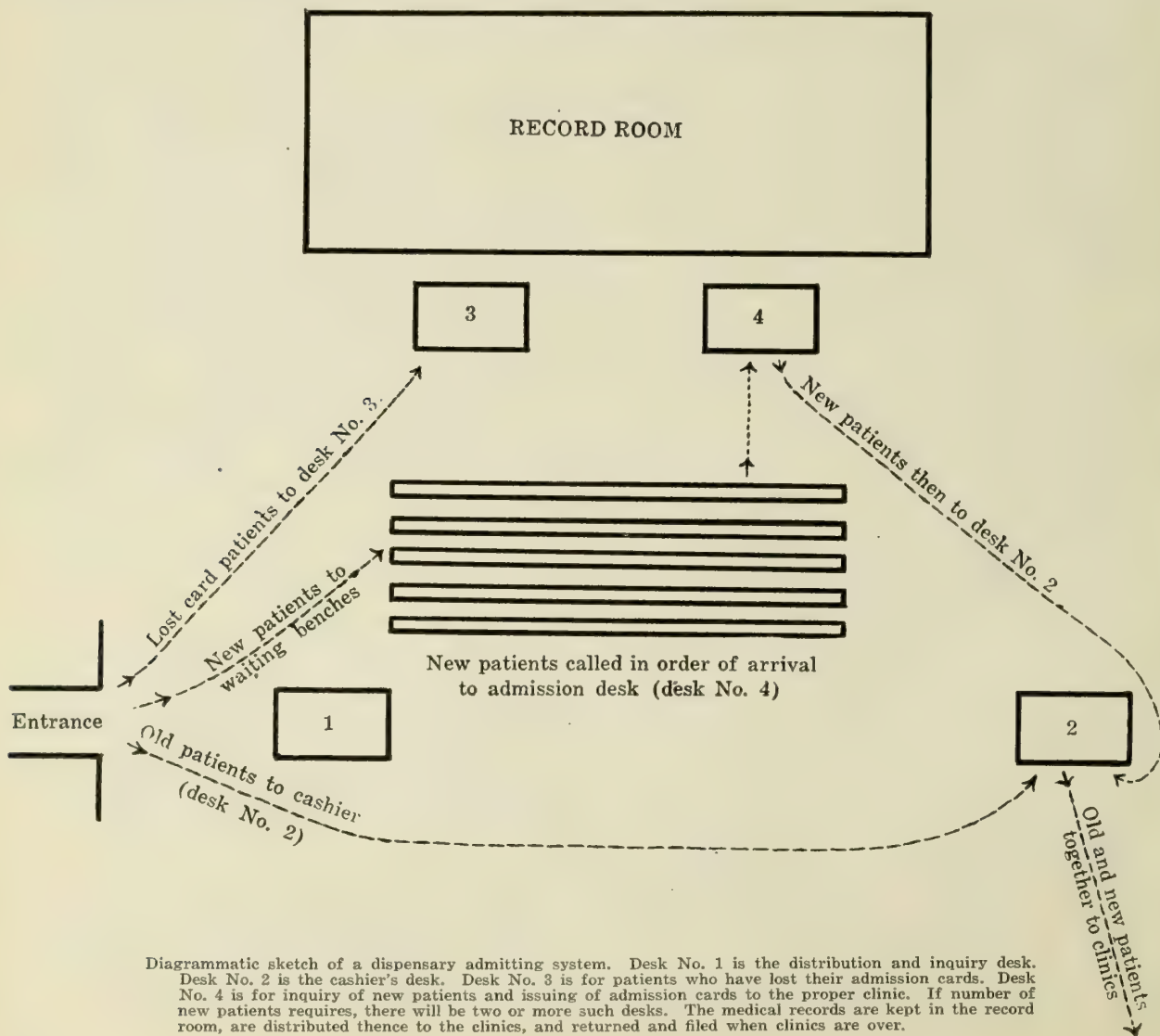
leadership of Dr. David L. Edsall and Dr. Wade Wright, and that at the University of Pennsylvania Dispensary, Philadelphia, having preceded it.

This clinic at the Central Free Dispensary will be under the direction of Dr. Harry E. Mock, who is head of the medical department of Sears, Roebuck & Co.

The development of industrial medicine, chiefly in connection with large manufacturing plants, has been very rapid in recent years. At the last meeting of the American Medical Association in Detroit a group of physicians engaged in this type of work formed an American Association of Industrial Physicians and Surgeons. Dr. Mock, secretary of that organization, will be in charge of the new clinic in Chicago, where evening clinics will be held.

Methods of Admitting and Registering Dispensary Patients

In response to a number of inquiries concerning this matter which have been received recently by this department, the following description has been prepared. The procedure of admitting patients will be readily understood by a diagrammatic sketch of a dispensary admitting system and the reproduction of a set of forms which are used in the administration of such a system in a large dispensary.



FORMS USED IN THE ADMISSION AND REGISTRATION SYSTEM OF A DISPENSARY

Form No.	Designation	Used at	For the purpose of	Remarks
1	Distribution slips	Desk No. 1	Dividing the incoming stream into (a) old patients, (b) new patients, (c) lost card patients, and of keeping (b) and (c) in order of arrival.	Plain cardboard slips, in three colors, 1½ inches by 2 inches in size, are numbered or lettered serially. Numbers given to new patients enable these to be called to the admission desk in order of arrival. Men and women may be separated, if desired, by giving out numbers in odd and even series. Lost card patients may be given the letter series.
2	Clinic slips	Desk No. 2	Furnishing a memorandum of the patients sent to each clinic, and a receipt for the fee if a fee is levied. The numbers on the slips enable the clinic manager to call patients in order of arrival, and also serve to give the registrar immediate statistics of daily clinic attendance.	Patients "who know the ropes" from previous visits, or who show their admission cards at desk No. 1, go at once to the cashier (desk No. 2), and, after paying a fee, if such is required, receive their clinic slip, which they must show at the clinic in order to be admitted. New patients, after being passed by desk No. 4, go to desk No. 2 and follow the same routine. The set of slips for each clinic may be numbered from 1 up each day, or in a cumulative series. The cashier keeps the stub, gives the patient the slip, stamping both with the date and fee paid.
3	Admission card	Desks Nos. 4, 5, etc.	Serving the patient as a voucher for his admission (and first fee if any); enabling him to show this at later visits; giving patient information, in some cases, as to hours, days, or rules of clinics.	Issued to patient at first visit after inquiry at admission desk. Numbered serially, the number being that under which all the patients' clinic records are filed. If lost by an old patient, is reissued, with former number. The card should be of board or linen, so as to be durable.
4	Clinic record	Desk No. 4, in clinic and record room and in clinics	Recording the medical record of the patient and certain personal and social data. A permanent record.	Data above second red line filled out at desk No. 4 at patient's first visit. Serial numbers the same as on patient's admission card. Medical record filled out in clinic. A patient treated also in other clinics may have a separate card for each clinic, but all are filed in record room under same number.
5	Index card	Record room	Constituting an index (alphabetical) to all patients who have been treated in the dispensary at any time.	Filled out from the data taken at desk No. 4; filed alphabetically in record room. In the form shown the data are copied out (preferably typewritten) from the upper half of the clinic record, the copying being done after the clinics are over for the day and the records have come back to the record room.
6	Fee remission slip	Desk No. 4 and by certain officials of dispensary	Remitting a fee, in whole or in part. Good on one day only. It is wise not to print on the slip the words, "Fee remission," or the like, but to use a distinguishing color. Similarly with No. 7.	Issued by registrar or admitting officers, or by social workers or other officials authorized to sign them. Shown by patient at desk No. 2 and accepted by cashier in lieu of fee. Cashier stamps clinic slip and stubs for the amount paid, or as "Free," and keeps the remission slip, with the stub as a cashier's voucher.
7	Free pass	Desk No. 4 and by certain officials of dispensary	Enabling a patient to secure a series of fee remissions for a specified period, during which it is judged such remissions are necessary.	Used as No. 6, except that patient retains the pass until its expiration. At each visit, on presenting the pass to the proper officer, a fee remission slip is given out for use on that day. Free passes are rarely to be given for more than one month, a reinquiry being then made before renewal.

Boston Dispensary					
Name		Age		No.	
[Red line]					
Address					
S. M. W. D.	Came to	Parent	Name of Parent		
Birthplace	U. S. A.	Nativity	Husband, Wife		
Occ'n of Patient (<i>Industry, Dept. Process</i>)					Wkly. Rate of wages \$
Occ'n of Head of Household					" \$
Unemployment		No. Children	No. Married	No. Working	" \$
Others dependent, contributing					
[Red line]					
Patient complains of					
Previous Treatment (<i>Private doctor, other institution, none, druggist</i>)					
Reason for Change					
[Red line]					
Dept.		Date		Social Service	
				S. S. No.	
				{ Yes	
				{ No	
[Red line]					
Here follow 17 blank lines for memoranda.					
[Red line]					
Diagnosis (<i>at first visit</i>)					
Diagnosis (<i>give date</i>)					
"					
"					

NOSE AND THROAT

Room 235 2d Floor

Date

Paid

No.

NOSE and THROAT

Room 235

Form 2. Actual size.

BOSTON DISPENSARY

25 Bennet Street, corner Ash

Patient's Name

Age

No.

Address

Dept.

Date

Dept.

Date

Dept.

Date

Dept.

Date

Dept.

Date

Dept.

Date

Dept.

Date

Hours

Morning Clinics

8.45—10.30

Evening Clinics

7. — 8.

KEEP THIS CARD

If you do not bring this card with you when you come to the Dispensary, you must pay ten cents for a new card.

Form 3. Actual size.

Expires

BOSTON DISPENSARY

25 BENNET STREET

Patient's Name

Signed

Form 7. Actual size.

Patient's Name

Age

yrs.

mos.

No.

Address

Social Status

Birthplace

Race or Color

Name of Father, Husband, Etc.

Remarks

Date

Dept.

Date

Dept.

Date

Dept.

Date

Dept.

Date

Dept.

Date

Dept.

Date

Dept.

Date

Dept.

Boston Dispensary Registration Card

Form 5. Actual size.

PHILANTHROPY AND THE PUBLIC HEALTH

Conducted by THE NEW YORK ASSOCIATION FOR IMPROVING THE CONDITION OF THE POOR.
BAILEY B. BURRITT, General Director.
WILLIAM H. MATTHEWS, Director.
Department of Family Welfare.

Please address items of news and inquiries regarding Philanthropy and the Public Health to the New York Association for improving the Condition of the Poor, 105 East Twenty-second street, New York City.

HOW WE KEPT THE KIDDIES OUT OF DANGER

* * *

Summer Camps for Children as Safeguards Against Infantile Paralysis

BY JONATHAN A. RAWSON, JR., Executive Secretary New York Association for Improving the Condition of the Poor.

It was a trying situation which last summer confronted New York City's philanthropic organizations which give outings at the beach or in the country to the mothers and children of the tenements. Never was there greater need for fresh air work; yet never were there greater obstacles in its way. The city was panic stricken by the infantile paraly-



One group of guests at Gray Mouse Farm. There is more fun and freedom here in a day than in a month in the city streets.

sis epidemic. All the wealthy, the well-to-do, and the moderately well-to-do—that is, all who could in any way afford it—sent their children out of the city as rapidly as they could break through the quarantines imposed by various state and city authorities.

The poor could do nothing of this sort. Their only vacations are such as are given to them by the various fresh air funds. Many thousands of the city's poor benefit for a few days, and in some cases for several weeks, by summer outings which are arranged for them by these agencies, thanks to the generosity of thousands of kindly disposed people inside the city and out.

But the infantile paralysis epidemic changed all this, or at least seriously threatened to do so. Tenement mothers became panic stricken and refused to let their

children go out of the house. Children were forbidden by the health authorities to congregate in public places, play streets were closed, picnics were postponed, Sunday schools closed, and everything possible done to prevent the little people from herding together. Country fresh air homes refused to receive city children as usual. Summer camps were closed and every possible thing was done, apparently, to keep tenement waifs as closely confined as possible in their own homes and streets, where the danger of infection



The "Gray Mice" discover the Hudson River. No thought of infantile paralysis here.

was greatest of all. Just at the time when these children should have been protected as carefully as possible from the disease they were forced to stay where the danger of contracting it was greatest.

For a time the fresh air agencies seemed entirely helpless. What could they do? Many of them simply could do nothing whatever, because the only places to which they could send their children were closed. This was the case in the country districts surrounding New York city. The



The boys' camp at Southfields, where boys from the tenements have nothing to do but eat, sleep, play, and grow.

problem of getting the children outside the city through the quarantines was alike an attempt to rescue the citizens of a besieged city without their capture or discovery by the enemy. The situation was a most distressing one, for it seemed that all the social welfare forces which work so persistently for better health conditions in New York were face to face with the necessity for admitting that they were utterly powerless to cope with the situation. Nor can it be denied that this was actually the case, and that,

if next summer another infantile paralysis epidemic were to break forth, the same situation would develop.

Typical of the troubles which confronted the fresh air agencies were those of the New York Association for Improving the Condition of the Poor. The handicaps imposed on the association were identical with those imposed on other agencies, yet fortune seemed exceptionally kind to the association. In the first place, its big fresh air headquarters, Sea Breeze, is on the beach at Coney Island, within the city limits, and is under direct control and observation of the city health authorities. No state health department or officious local board stood between the children and Sea Breeze. Thus the children could come and go from Manhattan to Sea Breeze with no quarantine to hold them up. They could first be carefully examined and their good health assured before they were sent to the beach, and, while there, could be under the daily observation of competent nurses and physicians. So Sea Breeze remained open throughout the summer. In August, when the epidemic was at its worst and there was a crying need for relief for the indirect sufferers of the epidemic—the children who had been kept in their homes under quarantine, although not themselves afflicted—one of the play pavilions at Sea Breeze was turned into sleeping quarters for small boys, so that the mothers and younger children could have more room in the main building. By this change the capacity of the home was increased to nearly 400. The work was continued late in September, or as long as the weather would permit.

Early in July the Association for Improving the Condition of the Poor, cooperating with the New York *Globe*, established a nutrition camp for boys at Southfields, N. Y. By a remarkable piece of good fortune the camp was opened, and its first group of 150 guests was sent to Southfields, just before the health authorities in the suburban districts began to get busy. By the closest sort of cooperation with the health authorities in the city and out, by the signing of many certificates and by virtue of many examinations, the camp was kept open continuously to October

1, having a total of 431 guests, who stayed an average of 19 days.

The association also had last summer two other new fresh air homes. One of these at Germantown, N. Y., was for adults in need of country convalescent care, and the other, at Saugerties, N. Y., was for young girls who, like the boys at Southfields, needed special medical observation and treatment which they could not get at the larger fresh air headquarters.

There was little difficulty in opening and maintaining Cherry Acres, the Germantown Home, but it was not so easy a matter to get the little girls to Gray Mouse Farm at Saugerties. However, 57 of them did get there and had a total of 1,260 days' outing, although the Farm was not ready for them for this purpose until the summer was partly over.

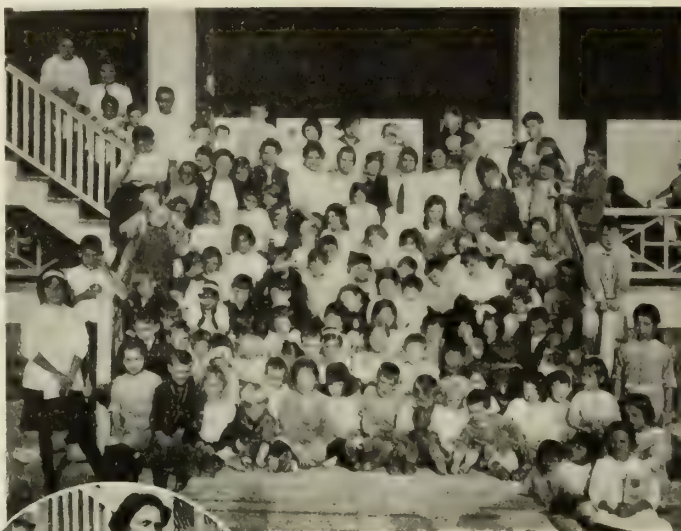
The total number of days' entertainment given by the association in these various homes last summer was 55,605, a large increase over previous records. In 1915, for instance, the number of days' entertainment was 42,228, and the year before that it was 39,919, an increase of 2,309 days.

The summer's experience brings to light a tremendous problem for the city's health agencies, municipal and private, which still remains to be settled. Whether they will be able to settle it before physicians learn how to deal with

poliomyelitis, no one can say. While efforts will be made to bring about the desired conditions before that disease is successfully combated, it is doubtful if it can be done.

Dr. L. B. Cline, superintendent of the Christian Hospital, Vigan, P. I., is a new subscriber to THE MODERN HOSPITAL. The Christian Hospital is maintained by the Foreign Christian Missionary Society, and the record of persons treated at the institution totals 20,000 a year. A training school offering the course prescribed by law in the Philippines is conducted by Mrs. Cline. The same society operates the Mary Chiles Hospital at Manila and the Read Memorial Hospital at Laoag.

A 21-bed private hospital has just been opened at Westminster, S. C., by Drs. J. H. Johns and W. A. Strickland.

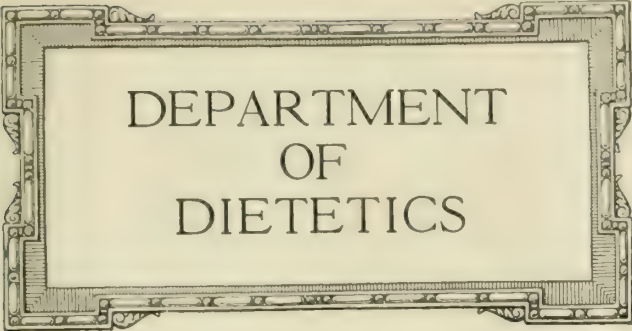


Enjoying Sea Breeze, with its sunshine, shade, cool sand, cooler surf, playgrounds, bountiful meals, and a cool, clean, quiet place to sleep.

A vacation at Sea Breeze works wonders for a family like this.



Off to Sea Breeze, away from the stuffy tenements and hot city pavements.



DEPARTMENT OF DIETETICS

Conducted by MISS LULU GRAVES,
Dietitian of Lakeside Hospital, Cleveland, Ohio.

Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, Ohio.

Citrus Fruits in the Hospital

A food to be of dietetic value does not necessarily furnish energy or build tissue. The sugars in fruits do furnish some energy, but fruits perform other functions equally important. They introduce into the system salts and organic acids, which are beneficial to the blood and react favorably upon the secretions. They are refreshing, stimulate the appetite, and serve as a means of introducing water into the body.

Citrus fruits are well adapted to our needs, even though they have a low caloric value, as they are nearly always available and they are agreeable to almost everyone. The principal acid of these fruits is citric acid, though phosphoric and malic acids are also present. Grape fruit contains considerable acid, although not as much as the lemon; it has a characteristic flavor, which makes it very appetizing, especially for breakfast. Oranges have very much less acid than either lemons or grape fruit, but they have a much higher percent of sugar.

Because of their pleasant and distinctive flavor, these fruits may be used in a great variety of ways, a feature which makes them particularly valuable in the sick room. For the patient requiring much liquid, a monotonous routine may be avoided by the use of lemon or orange juice. Everyone is familiar with lemonade and orangeade, and a combination of the two juices. But a stimulating drink may be made which is very pleasing to the patient by use of a combination of lemonade and weak tea; albumin drinks are made more palatable by the addition of either lemon or orange juice. For these same patients, whose diet must be very simple, ices made from orange or lemon juice and a syrup of sugar and water are refreshing and an agreeable change.

Gelatin desserts, also, made from these juices and a syrup of sugar and water, and thickened with gelatin or Irish moss, are a great help in the diet of the sick. More nourishing provision is made by preparing egg-nogs in various ways and flavoring them with orange or lemon juice. If properly prepared, these will not curdle.

For the patient who can have a less restricted diet, numerous custards, souffles, and puddings may be prepared with lemon or orange juice as the flavoring. Grape fruit and oranges combine well with each other and with many other fruits, or with celery or with nuts in making salads. The juice of oranges, lemons, and grapefruit has been considered for many years as the best remedy for scurvy in adults. It is now being used almost universally in the feeding of infants to prevent scurvy. When sterilized milk is used, orange juice is given in practically every

instance. For one with no desire for food it is frequently found that grapefruit or orange will stimulate an appetite for food. So few fruits are available for the diabetic patient, that we consider grapefruit almost a necessity for them. A slice of lemon held in the mouth will often remove the disagreeable taste due to a coated tongue. In fact, no other fruits are so generally used in the hospital as the citrus fruits.

Food Selection for Rational and Economical Living¹

BY C. F. LANGWORTHY,

Chief, Office of Home Economics, State Relations Service, United States Department of Agriculture.

[Concluded from November issue.]

For the guidance of the food expert (dietitian or other specially trained worker) dietary standards have been proposed which show the proportion of protein and energy which the daily diet should supply. Such dietary standards are designed as guides for home and institution management, and should not be confused with expressions of physiological requirement. In quantitative discussions and in comparisons, one should always distinguish clearly between "food purchased," "food eaten," and "food digested," and should take the further precaution not only to compare like things, but to compare them on a uniform basis. The basis most often selected for comparing dietaries is the food or diet of "a man in the period of full vigor weighing 150 pounds and engaged in moderate to active muscular work," and factors for computing the requirement of men, women, and children in other circumstances in terms of this standard have been worked out. These precautions should always be taken in comparing the results of dietary observations, experiments and studies; otherwise, avoidable confusion results. If they are so taken into account, many of the seeming differences of opinion which sometimes lead to divergent conclusions will be found nonexistent. When all precautions are taken for accuracy in comparisons and discussions, differences in the amounts of protein and energy found in the diet of different persons and different races are still apparent, as well as differences of opinion as to the amount of nutrients and energy required or desirable. Such differences of opinion, however, are not so great as one might expect, and one may well conclude, from a survey of the dietary studies of different races available, that persons of like age, sex, and work, given an opportunity to select, instinctively choose diets showing, when reduced to uniform terms, a decided similarity with respect to the protein and energy they supply. This is not surprising when one recalls that all reasonably normal men possess bodies and possibilities of using them which do not vary within such very wide limits. A steam engine of a given size and type will require the same amount of fuel of a certain kind in Asia as would a duplicate engine in America for the production of a like amount of power, and why should this not be true of the human engine as well?

A large number of dietary studies made in the United States, considered in comparison with the other large number made elsewhere, have led to the conclusion that not far from 100 grams of protein per day, along with 3,000 to 3,500 calories of energy, represents, for the typical man (in the period of full vigor, engaged in moderate to active muscular work), the quantities which the food purchased should supply. We have not as yet been able to test with any degree of accuracy the protein optimum, though data on the subject are abundant enough to indicate that the suggested value represents common race habits. With

¹By permission of the Scientific Monthly, where this valuable paper was first published.

energy the case is different, for it is possible with the respiration calorimeter to test the accuracy of the value suggested in any given dietary standard. Such tests show that the values given above are in accord with actual measurements of the energy expenditure of individuals under the specified circumstances of work and rest.

A consideration of the results of American experiments and other data has led us to conclude that with our ordinary food habits, involving, as they do, the use of a considerable variety of foods in reasonably liberal quantities, one is justified for many purposes in discussing dietetics on the basis of energy only, since a diet which supplies 3,000 to 3,500 calories of energy per man per day, as ours so very commonly does, almost inevitably supplies the needed protein, ash, and other constituents also. Particularly is this the case when one takes pains to include in the diet a reasonable amount of milk, green vegetables, and fruit. If we accept this conclusion as rational, it enables us to go ahead without controversy until the time comes when we have more abundant knowledge of the kinds and quantities of protein we need, of the functions of mineral elements and the best ways to meet our body needs for them, and of the nature of vitamins or other regulatory substances.

It is no new thing to realize that, although empirical knowledge and experience may lead to really good results, it is easier to achieve them if there is also special knowledge and training. Thinkers and writers in the past have given their time and attention to the problems of dietetics, and have left us much which is interesting and useful. That we can discuss the problems more fully and more adequately at the present time is due to the great progress made in biology, physics, chemistry, medicine, and other sciences. The question comes, how can we best translate the results of scientific investigation for the housekeeper's benefit. It was natural enough that at first we should try to do this in laboratory terms and expect the housekeeper to learn them. As a result, books, pamphlets, charts, etc., have been provided for her which in many cases cannot be understood without special training, and for this time and opportunity are only too often lacking. Later has come the realization that, while the specialist who follows home economics as a profession needs wide and varied technical knowledge, the woman who practices the art of housekeeping chiefly needs, aside from the skill which she gains by experience, simple statements of facts and definite methods by which she may obtain desired results. With this realization has come the attempt to formulate more simple and pedagogically correct methods of instruction, and to provide illustrative material in pictorial or graphic rather than tabular and diagrammatic form. It starts with materials and facts familiar to the housekeeper, and, as far as possible, applies standards which have been tested in practical as well as experimental use. Its advocates believe that, by thus bringing practice and theory into direct and vital connection, their teaching is more likely than either the scientific or the empirical method of instruction not only to result in more rational housekeeping, but also to supply the element of culture which raises any labor to an occupation.

In its studies of methods for imparting information through its extension and other activities, the Department of Agriculture has endeavored to classify common foods in a way corresponding to their distinctive functions in nutrition. The division must be more or less arbitrary, for some foods could go almost equally well in two or more groups. Thus milk, which is a general food, is included with the protein foods because it is a valuable

source of this nutrient. Bread is a carbohydrate food, a protein food, and an ash-yielding food, but it is classed as a carbohydrate food because its most obvious constituent is starch, and because we use it in the same general way as we do starchy foods like potatoes. The classification as now arranged consists of five groups, and it is the understanding that each of these groups should be represented, if not at every meal, at least once a day, and that, if an excessive number of food materials from any one group are used in the course of a day, the result is likely to be unsatisfactory from the standpoint of rational dietetics or of taste.

SOME COMMON FOODS GROUPED ACCORDING TO THEIR CHARACTERISTICS

(All five groups should be represented in the diet every day.)

Group 1 Foods characterized by protein	Group 2 Foods characterized by starch and similar carbohydrates	Group 3 Foods characterized by fat	Group 4 Foods characterized by mineral substances and organic acids	Group 5 Foods characterized by sugar
Lean meats Poultry Fish Oysters, etc. Milk Cheese Eggs Dried legumes Nuts And other protein rich foods	Bread Crackers Macaroni Rice Cereal breakfast foods, meals, and flours And other cereal foods	Butter Cream Lard and other culinary fats Salt pork Bacon Chocolate And other fatty foods	Spinach Peas Lettuce Potatoes Turnips Apples Oranges Berries And other vegetables and fruits, raw or cooked	Syrup Honey Jellies Dried fruits Candy And other sweets

The groups may be described in terms of the dietitian as follows: (1) foods in which protein bears a higher proportion to fuel value than it does in the well-chosen diet as a whole; (2) those in which fuel value is high in proportion to protein, owing chiefly to the presence of much starch; (3) those in which fuel value is high, owing to the large percentage of fat; (4) those whose chief value is mineral constituents and vegetable acids (the latter important from the standpoint of flavor as well as of body needs); and (5) those which (like the foods in groups 2 and 3) have a high fuel value, but in this case due to the presence of sugar. From the standpoint of fuel value only, it is obvious that groups 2 and 5 could be combined. From the standpoint of the well-chosen and palatable meal, on the other hand, they should be kept distinct, since sugar is frequently as important as a flavor as it is as a food.

In housekeepers' terms the groups may be described as: (1) flesh foods (except the very fattest), milk, cheese, eggs, and such meat substitutes as dried beans, peas, and the other legumes, and some of the nuts; (2) starchy foods; (3) fat foods; (4) watery fruits and vegetables (excluding dried legumes and fruits which have been dried or combined with much sugar; and (5) sweets.

The grouping is easy to remember, and provides a guide for the housekeeper in the selection of food materials for a meal or for a day's ration, and also a means of checking up and criticising the meals which have been served.

It is obvious that, while some foods belong clearly to one group—sugar and honey to group 5, for example, and liver and veal (which contain very little fat) clearly to group 1—other foods are difficult to classify. Mutton, for example, is a protein food which might also be classed as a fat food, and dried navy beans might be classed as a protein and also as a starchy food. To cite another example, potatoes, which are an important source of mineral substance, with some organic acid, are included in group 4 rather than in group 2, which at first thought

might seem the more logical place for them when we recall that they are so generally used as a source of carbohydrate (starch). In general, however, the system of groupings will be found helpful.

The following sets of menus contain none but wholesome and desirable food materials. These food materials, however, have been poorly combined so far as the protein, fat, and carbohydrate which they provide are concerned. The first set is characterized by much protein, the second set by much fat, and the third set by much carbohydrate.

MENUS WITH PROTEIN PREDOMINATING

Breakfast.—Cereal cooked in milk, chicken hash with egg, popovers, butter, and milk as a beverage.

Dinner.—Dried bean puree, halibut steak, potatoes scalloped in milk, tomatoes stuffed with chopped beef, bread and butter, and frozen custard with nut cookies.

Lunch or supper.—Baked beans, nut bread and butter, old-fashioned rice pudding, and a glass of milk.

The following shows a day's menus (not at all unusual or peculiar) in which fat foods predominate.

MENUS WITH FAT PREDOMINATING

Breakfast.—Oatmeal with cream, sausage, and corn bread and butter.

Dinner.—Cream of tomato soup, mutton chop with creamed potatoes, greens cooked with bacon or pork, bread, and suet pudding with hard sauce.

Lunch or supper.—Creamed salmon, lettuce with oil dressing, tea biscuits and butter, pumpkin pie, and a cup of chocolate.

The following is an example of three meals of combinations common enough, but in which carbohydrate (starch and sugar) predominates:

MENUS WITH CARBOHYDRATE PREDOMINATING

Breakfast.—An orange, followed by corn cakes with maple syrup, and bread or toast and butter.

Dinner.—Meat pie and baked potato, green peas, bread and butter, and cottage pudding with chocolate sauce.

Lunch or supper.—Rice croquettes with jelly, rye bread and butter, baked apples, and sugar cookies.

The food and fuel value of the menus served are given below, the portions served being of the average and usual size for an adult.

Described in technical terms, for the benefit of the dietitian, the first day's menu supplies 4.2 grams of protein per 100 calories of energy, or 2,356 calories of energy per 100 grams of protein; the meals of the fatty menu, 2.4 grams of protein per 100 calories of energy, or 4,120 calories of energy per 100 grams of protein; and the meals of the starchy (carbohydrate) menu, 2.5 grams of protein per 100 calories of energy, or 4,081 calories of energy per 100 grams of protein.

Speaking in terms of the housekeeper, into the first day's menu there went sixteen food materials other than fresh fruits and vegetables, of which nine were from group 1. Milk entered into or made up ten dishes; eggs, four; nuts, two; and beef, fish, chicken, dried beans, and dried peas, each, one. Into the second day's menu went nineteen food materials other than fresh fruits and vegetables, of which nine were distinctly fatty foods (lard, oil, butter, cream, salt pork, and others), while the meat, fish, and even the cereal were those which contained comparatively high percentages of fat. Into the third day's ration went eleven food materials, of which six were starchy or sugary (rye, wheat, corn, rice, maple syrup, cane sugar). Thus,

by unwise choice, one characteristic of the well-chosen diet—a right proportion between protein and fuel—was omitted.

It is hardly necessary to say the different combinations of vegetables and fruits may be made in which the proportion of mild vegetable acids and ash to the other nutrients in the total diet may vary widely—a fact which could be

THE COMPOSITION OF THE NUTRIENTS AND THE ENERGY SUPPLIED BY THE MENUS USED FOR ILLUSTRATION

	Weight of edible food served, grams	Protein, grams	Fat, grams	Carbohydrates, grams	Fuel value, calories
Protein meals—					
Breakfast	471	36	50	54	810
Dinner	772	58	64	120	1,288
Lunch or supper	639	33	38	106	894
Total	1,882	127	152	279	2,992
Fatty meals—					
Breakfast	353	24	69	58	949
Dinner	617	33	88	108	1,356
Lunch or supper	621	29	83	98	1,259
Total	1,591	86	240	264	3,564
Carbohydrate meals—					
Breakfast	509	15	32	168	1,020
Dinner	529	40	33	133	989
Lunch or supper	376	14	27	127	807
Total	1,414	69	92	428	2,816

shown by similar groupings of food materials into menus.

To benefit by well-selected menus, each member of the family should eat all the kinds of food provided, for, if a person habitually eliminates some particular sort of food, as fruits and green vegetables, he has failed to take advantage of the housekeeper's selection, no matter how good it may be. One must, speaking broadly, relish all kinds of food, which is a matter of good habits and good manners as well as of physiological importance.

The housekeeper who will learn the simple classification of foods mentioned above can easily see the relation of the different groups of foods to the character of the meals she provides. She need only go a step further to realize that it is wiser to provide dishes varied in character for a given meal, and also meals varying from those of the same day and varying from day to day. She can do this easily by taking care to see that the different food groups are represented in at least two of the three meals she serves each day. The more extended her information as to market facilities, the wider her knowledge of standards of quality, the wiser her selection of foods, and the greater her skill in preparing and cooking them, the easier it will be for her to plan meals by this or any other method which will be reasonable, economical, and satisfactory, as well as adequate.

She can understand also that it is more important to apply the principle outlined to a considerable period of time than to a single day. A departure from the ideal for a day or so means little, for it can be made up the next day or the next week, while an irrational diet, if followed for a long period, may lead to marked disturbance or even serious illness.

The housekeeper need not go into the reasons for all these things which she has to attend to, but she will be quick to see in a general way the point of it all in so far as it concerns her problem of preparing suitable meals for her family. She need not know the theories of electricity to use and appreciate electric light, nor need she be burdened with the theories of dietetics, if she is willing to

trust the conclusions others have reached and apply them to her particular problems.

She naturally wishes for some tangible proof that her efforts to provide a rational diet as part of her good housekeeping are meeting with success. The general condition of her family should offer her fairly good evidence. Thus, it seems fair to say that the child who continues to approximate the average for his years with respect to weight and height, who is apparently normal in respect to work and play, and who exhibits none of the obvious symptoms of ill health, cannot be very faultily fed, any more than can be the adult who remains in fairly constant weight for long periods of time, making due allowance for the seasonal variation (such as the small loss in weight in summer and the small gain in winter), and has other attributes of good health. As one reaches middle life it is wise to be more abstemious in matters of diet, as in other things, for the body is "slowing down" and becoming less active, and so needs less food. If, in any case, things do not seem to be as they should be, advice should be sought from a physician or other expert, as he alone can judge whether there is an actual departure from normal and whether it is due to diet or to some other cause.

Experience shows clearly that the experimental and the professional worker can be more helpful to the housekeeper than heretofore. The Department of Agriculture is doing what it can to accomplish this important end. The method for translating technical matters of diet into housekeepers' terms, which is outlined above, is an attempt to do this. The method can be modified as experience indicates is desirable, and the subject-matter can be amended to keep pace with the results of investigation and experiment.

The Chemical Composition of Commercial Glucose and Its Digestibility

BY DR. J. A. WESENER, AND PROFESSOR G. L. TELLER, of the Columbus Laboratories, Chicago, Ill.

The term commercial glucose has been applied to a product obtained by the action of certain catalytic agents upon refined starch until the starch has lost its identity as such and has been converted into a series of products, consisting of d-glucose, maltose, and different forms of dextrin. The dilute liquid thus produced is clarified by passing over boneblack, and is then carefully evaporated, either to a solid substance or to a syrupy condition known as glucose syrup. The glucose thus produced in this country is made entirely from corn starch, and for this reason the syrup is designated as corn syrup. It consists of about one-fifth of its weight of water, very minute traces of nitrogenous bodies, a very small amount of ash, and a group of carbohydrate bodies, consisting of dextrose, maltose, and probably several forms of dextrin, and paralleling closely the bodies of a similar nature obtained by the action of malt diastase and other diastases upon starch.

There is apparently a border line between the bodies commonly known as dextrin and that known as maltose, which has led to great confusion in the minds of the chemists who have investigated this subject, largely because of the difficulties attendant on the separation of such bodies from maltose on the one hand and the different forms of dextrin on the other, and the consequent confusion with these bodies and with mixtures of them. The confusion of ideas concerning glucose syrup has been participated in by a large number of investigators, extending in time over a period of twenty to thirty years, and has led to the introduction into the literature of such terms as "gallisin," "iso-maltose," "malto-dextrin," and others.

The voluminous literature on this subject appears to have been reviewed completely by various writers without coming to any definite conclusions as to results. The latest edition of such an authoritative work as Allen's "Commercial Organic Analysis" (4th ed., vol. I, 1912), dismisses the matter with the following brief summary:

"Gallisin, as hitherto obtained, is not a definite compound, and it appears advisable only to retain the term as synonymous with unfermentable matter. The whole question of the structure of starch, the nature of the various dextrans and of iso-maltose still remains a vexed question in carbohydrate chemistry, and the utmost confusion exists as regards the subject. (The reader is referred to Ling's article on starch in Sykes' 'Text-book of Brewing' (1907)."

A review of the earlier literature is quite fully set forth in the third edition of the same work, published in 1898, and in Brown's "Handbook of Sugar Analysis" (1912) under the title of iso-maltose. A clear and concise statement of what appears to be the general understanding of these terms, as they are used, is embodied in the following definitions, as given in the Century Dictionary and Encyclopedia:

"Gallisin, in chemistry, a substance analogous to dextrin, obtained by fermenting with yeast a solution of commercial glucose or starch sugar and adding to the residual liquid absolute alcohol in excess. Gallisin is precipitated as a white powder, of faintly sweetish taste, hygroscopic, dextrogyrate, incapable of fermentation and yielding dextrose by prolonged heating with dilute sulfuric acid. Probably identical with iso-maltose, $C_{12}H_{22}O_{11}$ (Sadler 'Handbook of Industrial Chemistry,' p. 178).

"Iso-maltose, a substance formed together with maltose from starch on diastatic digestion. It has been produced synthetically from dextrose, does not ferment, and is isomeric with maltose $C_{12}H_{22}O_{11}$.

"Malto-dextrin, a variety of dextrans or starch-gum, produced in 'mashing' brewers' malt as an intermediate product between starch and fermentable glucose. Its claim to be considered a distinct substance is not clearly established."

The presence of so-called gallisin or iso-maltose in glucose has been attributed by some authors to a reversion process brought about by the action of dilute acid upon dextrose during the process of manufacture. This has led to an apparent misconception of the significance of its presence, and has brought in question the value of this portion of glucose as an article of food. One recent writer has gone so far as to state that this body is not only unfermentable, but is not hydrolyzable by enzymes, while Allen states, "by heating with dilute sulfuric acid for some hours, gallisin yields a large proportion of dextrose, but its complete conversion has not so far been effected."

It has been the purpose of the work on which this article is based to clear up some of these points, especially with reference to the assumed presence of an unfermentable body which is not hydrolyzable by enzymes and which consequently would not serve as an article of food.

[To be continued.]

A Change of Work

Miss Ruth Wardall, who has been in charge of the home economics department of the Iowa University, is taking a year from her work there to be with Dr. Mendel in his experimental work at the Sheffield laboratories. Miss Wardall is very enthusiastic over what she is doing and what she hopes to accomplish. Knowing both Miss Wardall and Dr. Mendel as we do, we know there is good reason for this enthusiasm.

The University Hospital in connection with the University of Iowa has established a metabolism ward, in which they are doing very interesting things. Miss Sawyer, a graduate of the University of Illinois, is doing the dietetic work in this ward.



INDUSTRIAL WELFARE

The Occupational Hazard in the Chemical Industry—The Need for Prophylaxis¹

BY J. W. SCHERESCHEWSKY, Surgeon U. S. P. H. S.

We are observing in this country, as a part of the general campaign for the improvement of the public health, an awakening on the part of the industries to the necessity for safeguarding life and limb. That, in the past, we may be charged with indifference to the physical welfare of the worker arises from the fact that, in the midst of our unparalleled industrial expansion, we have somewhat lost sight of the man behind the machine. Production has been our aim; we have been prodigal of the life and health of our workers as we have been of other less important natural resources.

Yet we are now rapidly coming to a lively sense of the social and economic importance of protecting the health of workers. In former years the chemical industry has been accused with neglecting this paramount duty. The occasion, therefore, of holding this symposium is a sign of the happiest augury for future improvements in this respect. Indeed, the necessity for adequate protection of the health of chemical workers is a self-evident proposition, for, aside from the ordinary hazards to health inseparable from industrial life, there are many specific hazards provoked by the nature of the substances dealt with. The great German hygienist, Weyl,² in writing of the chemical industry, thus characterizes it: "Compared with the chemical industry, there is none other in which the workers may be exposed to such varied and manifold injuries to health."

The chemical industry, together with its allied branches, is so extensive that in the time at my command I can give but little more than a bird's-eye view of the possibilities of damage to the health which occupation in this country may cause. This industry has made gigantic strides in our country. Its colossal development of the past promises to be transcended by its future growth. A summary dated September 14, 1916, of the Census Bureau concerning the general chemical and allied industries gives the following comparative figures, which show the development of this industry in 1914 as compared to 1909. In that year the total value of the products of the chemical and allied industries was \$800,722,356, whereas in 1914 the value of the products was \$1,228,403,984, an increase of \$427,631,628, or 53 percent. The forthcoming extension of the manufacture of coal-tar products, as well as European conditions, seems to portend an accelerated expansion of this industry in the future.

In the past the chemical industry has been but little studied in this country from the standpoint of industrial hygiene. Chemical works are usually located on the outskirts of communities; the general public has always been

convinced of the mysterious and alchemistic character of chemical processes; many processes are so-called trade secrets, and therefore jealously guarded by manufacturers; many branches of the trade have been surrounded by mystery. Notwithstanding these conditions, which tend to discourage investigation, there have been certain investigations in this country, notably by the Illinois Commission on Occupational Diseases and the New York State Factory Investigation. Abroad, especially in Germany, conditions in the chemical industry have been more thoroughly studied, although even there, with the necessity for knowledge of industrial conditions required by the operation of health insurance laws, information concerning health conditions in the chemical industry is not so full as in other occupations. While, therefore, our knowledge of the subject is not as definite as is desirable, we may outline at least the main hazards to health to which chemical workers are subjected.

We have, first, the ordinary hazards which may arise in any industrial environment, and, second, specific hazards caused by the nature of the substances handled.

ORDINARY HAZARDS

The ordinary hazards to industrial health are those caused by the presence of darkness, dampness, stagnant air, exposure to extremes of cold and heat, long hours, fatigue, and monotony.

DEFECTIVE ILLUMINATION

While the chemical industry makes but little demand for close eye work on the part of its workers, the fact should not be lost sight of that dangerous substances are handled, the establishments are full of unexpected stairways, open vats containing caustic or corrosive liquids, dangerous substances are concerned in many packing and loading operations. Consequently adequate illumination is required to assist the worker in escaping accidents or injury to the health. Adequate illumination is, moreover, an important sanitary aid even in industries which involve but little exposure to eye strain. The generous flood of light has a stimulating psychological effect; production is increased; dark nooks and corners are illuminated; collections of dirt and rubbish are revealed, which otherwise would lurk unnoticed. Therefore adequate illumination is an important adjuvant to the sanitation of industrial establishments. Yet, in the investigation of the chemical industry made by the New York Factory Commission,¹ we find it stated that lighting was found inadequate in 64 percent of the establishments visited.

VENTILATION

While there is some divergence still as to the harmful factors resident in poor ventilation, all are agreed that an abundant supply of fresh air is a necessity for the worker. It makes but little difference if we base our standards of ventilation on the content of carbon dioxide of interiors, or if we consider the physiological needs of the body in the way of removal of the body heat as it is generated, together with an adequate stimulus to the skin by moving air currents; we cannot secure healthful conditions with respect to any of these factors except by an adequate air supply of the proper temperature and relative humidity. Reasonable provisions for ventilation are, therefore, necessary for the maintenance of health in any industry. They become doubly so in the chemical industry, where the numerous poisonous materials, dusts, fumes, and gases peculiar to the processes involved require special attention to ventilation. Yet in the report of the New York Factory

¹Read before the symposium on Occupational Diseases of the American Chemical Society, New York city, September 28, 1916.

²Th. Weyl, "Handbuch der Arbeiterkrankheiten," Jena, 1908, G. Fischer, p. 183.

¹State of New York, Second Report of the Factory Investigating Commission, 1913, vol. II, page 465.

Commission, just referred to, we are told (*loc. cit.*) that provision for mechanical ventilation was found in but 41 out of 259 chemical plants, or about 11.4 percent. Of course, in many instances the nature of the processes and the relative size of buildings may make such provisions superfluous; yet there can be no doubt that the chemical worker is too frequently subjected to the ill effects of poor ventilation.

EXTREMES OF HEAT AND COLD

The necessity for tending furnaces of various kinds subjects many chemical workers to the effects of extreme heat, often alternated with cold. While workers subjected to such conditions, often intolerable to the casual visitor, when asked "how they stand the heat," reply that they grow used to it, it must be remembered that tolerance to any injurious condition by no means constitutes a state of physiological adaptation. In young and healthy adults, living otherwise hygienic lives, we are often surprised at the little harm apparently resulting from exposure to intrinsically unhealthful conditions, yet a short period of lowered resistance, some temporary hygienic fault in the manner of living, some slight excess when off duty, is enough to cause the factor of safety to be exceeded, with resulting injury to the health. It is well known that exposure to great heat throws increased work on the heart and blood-vessels, interferes with nutrition, increases fatigue, diminishes endurance, and renders the individual more susceptible to diseases of the respiratory system. While exposure to great heat is inherent in many industrial processes, the amount of exposure is often needlessly great, the degree of heat unreasonable. Problems of heat mitigation may be said to constitute a branch of industrial hygiene too extensive to be entered on here. Suffice it to say that workers are often subjected to heat when by due forethought the necessity for and the degree of exposure might be greatly reduced.

LONG HOURS

The continuous maintenance of bodily efficiency requires that the worker return to his work completely recuperated from the previous day's fatigue. It is difficult to fulfill this condition when hours of labor have been unduly prolonged. Many instances of long hours of work in the chemical industry exist. This is especially true in continuous processes in which the working week consists of at least seventy-two hours, and often eighty-four. Thus in the census bulletin,¹ on the general chemical industry for 1909, the prevailing hours of labor for some 20 percent of the chemical workers were seventy-two hours or more weekly, 29 percent worked more than sixty hours weekly, while in the case of only 43 percent of the workers were the weekly hours less than sixty. It is evident, therefore, that the hazard of prolonged working hours is present in the chemical industry to a considerable degree. (Long hours also increase the risk of industrial poisoning because of the extended exposure and the carelessness due to failure of attention from fatigue.)

FACTORY SANITATION

The absence of proper facilities for factory sanitation, such as a pure drinking water supply distributed in sanitary drinking fountains, sanitary toilets, ample washing facilities, separate lunch rooms, and the like, exert an untoward influence on the health of the factory personnel. We hear much of the indifference or carelessness of workers in matters of personal hygiene, yet it is the duty of

every progressive manufacturer to provide ample facilities for the care of the body. This is especially true in the chemical industry, where so many irritating, corrosive, poisonous, and dusty materials are handled, yet the same report of the New York Factory Commission referred to shows that the general sanitation of chemical plants is sadly neglected. Attention to proper factory sanitation pays, not only so far as the individual worker is concerned, but also in the case of the community at large. It is true that provision for good factory sanitation must be combined with education of the personnel, especially of the unskilled, as to the use of these facilities. Such education, however, not only promotes the intelligent use of these provisions, but also raises the sanitary standards of the community, for the reason that the worker soon learns to apply to his home life what he has learned in the sanitary factory.

SPECIFIC HAZARDS

Apart from the ordinary industrial hazards just enumerated, the chemical trades obviously present certain specific hazards arising from the nature of the materials handled. These hazards consist of the effects upon the body of irritating or poisonous dusts, fumes, and gases. Dust and fume have been characterized by Sir Thomas Oliver, in his plenary address before the Fifteenth International Congress on Hygiene and Demography as the "foes of industrial life." Now, the chemical worker may be exposed, according to the branch of industry in which he is engaged, to practically any one of the entire list of industrial poisons published in Bulletin 100 by the Federal Department of Labor. While highly poisonous substances are handled daily with but little danger in chemical laboratories, it should be remembered that in the chemical trades workers, especially unskilled workers, have but little idea, as a rule, of the nature of the dangerous character of many of the materials with which they come in contact. This point has been repeatedly emphasized by various investigators. Acute poisonings are fortunately rare; in such cases the relation between cause and effect is usually self-evident. Who but an instructed worker, however, would correlate the gradual onset of weakness, impulsive laughter, uncertainty of movement, inability to go down hill without running, or inability to walk backward, with chronic manganese poisoning; or would ascribe the gradual clouding of his vision to long-continued exposure to weak fumes of nitronaphthalin?

Without going into exhaustive detail, I will therefore attempt at this point to discuss briefly the injurious effects on the body of certain well-recognized classes of chemical compounds. Rambousek¹ states that industrial poisons, from their action, may be grouped into three general classes:

1. Poisons which act superficially—i. e., which cause gross anatomical lesions in the tissues with which they come in contact. To this class belong especially irritant and corrosive poisons, such as the caustic alkalies and mineral acids.
2. Blood poisons—i. e., poisons which are absorbed by the blood, and change it. Such change affects either the coloring matter of the blood with which certain poisons (such as carbon monoxid) form definite chemical compounds, or the blood corpuscles themselves can be altered or destroyed, as, for instance, by benzol.
3. Poisons with definite internal action, a so-called remote or specific effect. To this class belong the poisons which, on absorption, act upon definite organs or tissues

¹Thirteenth U. S. Census, 1910; manufactures, 1909, statistics for the manufacture of chemicals and allied products.

¹Rambousek, "Industrial Poisoning," Legge's translation, 1913, page 158.

in a specific manner. Lead is perhaps the most common and best known of this type of poison.

While this grouping does very well as a rough means of classification, it is well to remember that some poisons display two or all of these modes of action. As industrial poisons may be absorbed either as solid substances, as liquids, or as gases, we may also classify them according to their physical characteristics—i. e., poisonous dusts, poisonous liquids, and poisonous fumes. This difference in physical form influences the method of absorption by the body. Poisons taken in in the form of dust are either inhaled or swallowed; liquid poisons, as a rule, may enter the body only through the skin, intact or broken. Gaseous poisons, as a general rule, are absorbed only through the respiratory tract. There is also a certain relation between the amount absorbed and the effects. All poisons are without effect if the dose be sufficiently small. There is, therefore, in each case a minimum dose, which, if exceeded, will produce symptoms. This minimum dose, however, is relative only, as it is often modified by the characteristics of the individual, such as age, sex, and body weight, or his habits, such as in the use of alcohol. We may also distinguish acute, subacute, and chronic poisonings, according to whether the symptoms are produced by the sudden absorption of large quantities; the frequent absorption of moderately large quantities, or the repeated absorption of small quantities.

As the list of industrial poisons, compiled by Fischer and Sommerfeld and published by the Federal Bureau of Labor,¹ mentions some eighty-two substances, all of which are capable of producing poisoning, it is impossible for me to enter into great detail. I must, therefore, content myself with a few general remarks on poisonous gases, liquids, and dusts.

POISONOUS FUMES AND GASES

So far as their action on the body is concerned, these gases may belong to any one of the three groups previously mentioned. In general, we distinguish two types of gases and fumes, the irritating and the toxic. The irritating quality of gases and fumes arises from their ability to attack the mucous membrane of the respiratory tract. If their concentration is sufficient, immediate death may ensue, with symptoms of suffocation. Less concentrated doses attack the delicate lining membrane of the pulmonary air cells, bringing about a condition of acute pulmonary edema or swelling. Doses still less concentrated may cause pneumonia, while repeated exposures to small doses give rise to chronic bronchitis. It seems almost superfluous to mention that the chemical industries offer abundant opportunities for the inhalation of such gases, of which the most usual are the halogens (chlorine, bromine, and iodine) and their acids (hydrochloric, hydrobromic, and hydriodic). The fatal effects of the inhalation of high concentrations of chlorine gas have been illustrated over and over again in the present war. In addition to the above, we must also mention hydrofluoric acid gas, which is more active than all of them in its attack on mucous membranes, including that of the eye, and also sulphurous dioxid, nitric, and nitrous acids, nitrous fumes generally, and finally ammonia.

In regard to nitrous fumes, which, unless due precautions are taken, are so frequently encountered by workers in cleaning out sulphuric acid lead chambers and towers, in nitrating as well as in other industrial processes, their delayed action is worth mentioning. After inhaling a fatal amount of these fumes, the worker may feel but a

momentary sense of suffocation, from which he apparently recovers on reaching fresh air, only to be seized several hours later with symptoms of a severe and rapidly fatal edema of the lungs. Apart from the acute effects of the gases just mentioned, there are the harmful results of chronic and repeated exposures to their diluted fumes. This causes a chronic catarrh of the respiratory tract of varying severity. The lowered resistance produced by this chronic inflammation may create a favorable soil for the implantation of the pneumonia or of the tubercle bacillus. In addition to this, acid fumes exert a deleterious effect upon the teeth, dissolving the enamel, and causing them rapidly to rot. This effect of acid fumes is wellnigh classical in the literature; no writer on occupational diseases would consider his book complete without an illustration depicting this effect of acid fumes. This destruction of the teeth is apt to be followed by chronic indigestion.

The following table by Leymann shows the minimum concentration of such fumes causing symptoms:¹

Name of gas	Rapid and dangerous injury, per 1,000	Bearable for 30 to 60 minutes without grave effects, per 1,000	Trifling symptoms after action for some hours, per 1,000
Hydrochloric acid.....	1.5-2	0.05	0.01
Sulphurous acid.....	0.4-5	0.05	.....
Carbonic acid.....	about 30	6-8	1-2
Ammonia.....	2.5-4.5	0.3	0.1
Chlorine bromine.....	0.04-0.06	0.004	0.001
Iodine.....	.....	0.003	0.005-0.001
Hydrogen sulphid.....	0.5-0.7	0.2-0.3	0.1-0.15
Carbon disulphid.....	0.01	0.002	0.001
Carbon monoxid.....	2-3	0.5-1	0.2

So much, then, for irritating fumes and gases. Passing now to fumes more distinguished by their poisonous than by their irritating action, the following, according to Rambousek,² are especially worthy of mention: (a) metallic vapors; (b) arsenical vapors; (d) gaseous blood poisons, which have special action on the hemoglobin of the blood; (e) carbon disulphid; (f) fumes of coal tar and coal-tar products, which have action both on the blood and on the nervous system; (g) certain organic compounds, such as the higher alcohols of the fatty series, wood alcohol, the pyridine bases, acrolein, amyl nitrite, nitroglycerin, camphor, and turpentine. In addition to irritative action, these have also special action on the nervous system.

I am again prevented, through lack of time, from entering into detail here. I will content myself, therefore, with mentioning a few of the most striking examples of each of these kinds of poison. Among metallic vapors, the most poisonous are those of mercury and lead. Among arsenic compounds, arseniuretted hydrogen is the most dangerous, as the inhalation of 1 milligram may produce fatal results. I need hardly remind you that the possibilities for the generation of arseniuretted hydrogen are present whenever hydrogen is generated by the action of acids upon metals containing arsenic as an impurity. In recent years a not infrequent industrial accident has been the generation of this gas by the accidental access of water to ferrosilicon. Phosphorus fumes are distinguished by their ability to cause disease (necrosis) of the jaw bone. Fortunately the match industry, which in the past has been the greatest offender in this respect, has been relieved of this odium in this country by federal legislation against the use of white phosphorus in matches. Among gaseous blood poisons must be mentioned carbon monoxid, hydrocyanic acid gas, and sulphuretted hydrogen. Carbon monoxid, because of its great affinity for the hemoglobin

¹Thompson, "Occupational Diseases," page 304; New York, 1914.

²Rambousek, Hartleben, "Lehrbuch der Gewerberhygiene," Wien and Leipsic, 1906, page 33.

¹Professors Th. Sommerfeld and Dr. R. Fischer; Bulletin No. 100, May, 1913, Bureau of Labor, Department of Commerce and Labor.

of the blood (some 200 times greater than that of oxygen), rapidly displaces oxygen from the blood, thus preventing its transport to the tissues. Death thus ensues from oxygen starvation. The action of hydrocyanic acid gas is similar. Sulphuretted hydrogen exerts a reducing action on the blood. Coal tar not only is irritating, but is capable of poisonous action by reason of the volatile aromatic compounds it contains. The most important of these are benzol, xylol, toluol, phenol, and naphthalene. Among coal-tar derivatives the following are especially poisonous: benzol, nitro and nitroso derivatives, and amido derivatives. Of the nitro compounds, nitrobenzol and trinitrophenol may be especially mentioned. Of the amido derivatives, anilin is by far the most important. In Germany anilin, in spite of stringent regulations, probably causes more industrial poisoning than any other chemical compound, with the possible exception of lead. Many of these coal-tar products are doubly dangerous because they may be absorbed not only by inhalation, but also through the unbroken skin. This latter property arises from the ability of many of them to dissolve fat, to the presence of which the skin owes not a little of its nonabsorbent qualities. Among the volatile compounds of the hydrocarbon series, wood alcohol, which has a selective action on the optic nerve, thus causing blindness, is probably the most important industrial poison.

POISONOUS DUSTS

By far the most important of these is lead. While we must regard the manufacture of lead products as an allied branch of the chemical industry, the subject of lead poisoning is so extensive and important, and lead products enter so extensively into other industries, that it should be the subject of separate treatment. Other harmful dusts are those of the chromates, which attack the skin, producing painful and intractable ulcers (chrome holes); dusts which, by their hygroscopic nature, can produce irritation of the skin and mucous membranes, such as quick lime, calcined dolomite, and the like; arsenical dusts, such as Scheeles green, Schweinfurt green, and Brunswick green; antimony dusts, such as golden sulphid and trioxid of antimony.

While the foregoing is necessarily but the briefest survey of the varied hazards of the chemical industry, I think enough has been said to show the manifold nature of the hazards to which chemical workers are exposed, and the necessity for careful surveillance if unnecessary disease and deaths are to be avoided. The necessity for such surveillance is further emphasized when we consider that but a small proportion of the personnel of chemical establishments consists of skilled workers, the great majority being unskilled workers of foreign birth, who, besides having the most rudimentary ideas of personal hygiene, are ignorant of the nature of the substances which they handle.

Before concluding, some reference, however, should be made to the frequency of illness in the chemical industry. Unfortunately we have practically no data in the United States as to this morbidity. Like others, therefore, I am forced to make use of foreign statistics. So far as the chemical industries are concerned, the best known of these statistics are those published by Grandhomme and by Leymann. Grandhomme's figures refer especially to workers engaged in the manufacture of coal tar products, while those of Leymann refer to workers in a number of branches of the chemical industry. The establishments which furnished these figures operate under the German system of health insurance, and were carefully supervised with a view to reducing the incidence of disease. Grand-

homme's figures show that the average number of sick days for each worker annually was 6.73. According to Leymann it was 10.2. Weyl thinks it justifiable to average these figures, and estimates that in Germany the average annual loss through sickness for each worker in the chemical industry would be in the neighborhood of 8.5 days. According to Weyl¹ this would give among 185,820 chemical workers insured in Germany in 1905, an annual time loss of 1,572,037 days. As the number of cases of illness was .88 to each worker, figured on this basis, Weyl calculates that there were 163,822 cases of illness, or, out of 100 workers, only 12 on the average worked through the year without sickness. In addition to illness, there were 10,000 accidents in 1905 in the German industry, of which 122 were fatal. The fatality rate among accidents was, therefore, 1.22 percent. This tends to show a rather high fatality rate for accidents in the German chemical industry, considering the attention that accident prevention has received in that country, for in the state of Pennsylvania² during the month of February, 1916, there were 24,475 accidents reported, of which 222 were fatal, a percentage of .91. Certainly the incidence of disease and accident is not less among chemical workers in this country than in Germany; indeed, we would expect it to be somewhat greater in view of the lack of racial homogeneity of the workers and the retarded development of protective measures.

In considering the incidence of disease in the personnel of a chemical plant, the fact should be borne in mind that such personnel does not present statistical unity. The personnel consists of two groups; one portion, the true chemical workers, coming in contact with the manufactured products, while a second portion, consisting of representatives of various trades, such as carpenters, bricklayers, machinists, and the like, and a still larger force of ordinary laborers, are very much less exposed to the specific hazards of the industry. This difference in exposure is well illustrated in Leymann's statistics. Thus the average annual loss from illness was 11.8 days for chemical workers, while for the others it was but 8.6 days, a difference of 3.2 days in favor of the latter. Among the various branches of the chemical industry, covered by Leymann's statistics, that of the manufacture of chrome products, with 17.2 sick days annually, yielded the greatest amount of illness, while the manufacture of potassium permanganate and organic chlorine compounds showed the least, 8.8 days.

Again, considering the type of illness, a striking difference between these two groups of workers is manifest. Thus, while 45 percent of the illnesses among chemical workers were internal diseases, only 27 percent of such diseases prevailed among the other workers. On the other hand, external diseases were distributed with some approach to equality among the two groups, the figures for chemical workers being 43 percent, and for the other workers 27 percent. In considering these statistics, we find a special predilection for certain groups of diseases in the following branches of the industry, while they are much less numerous in the remainder. Thus diseases of the respiratory system, according to Leymann, are especially frequent in the manufacture of acids, sulphates, chromates, caustic alkalies, bleaches, and trinitrophenol; diseases of the intestinal tract, while common in all chemical trades, predominate in the manufacture of acids, crude soda, the chromates, anilin, sodium sulphid, and in the regeneration of sulphur; burns are especially frequent in

¹Weyl, "Handbuch der Arbeiterkrankheiten," Jena, 1908, page 184.

²Monthly Bulletin, Pennsylvania Department of Labor and Industry, May, 1916, No. 5, page 4.

acid making, especially nitric acid, also in the manufacture of caustic soda, the chromates, and trinitrophenol; we find skin diseases particularly affecting workers in coal-tar products.

It is evident from the foregoing that our duty to chemical workers lies plainly before us. Studies of health conditions in this industry should be made in this country with a view to minimizing its inherent occupational hazards. It is time for us to awaken to the great social and economic losses due to the neglect of the health conditions in our industries. There are hopeful signs that this apathy and indifference is being removed. Thus a large chemical company has requested the Federal Public Health Service to undertake a survey of its establishments, so that recommendations may be made for the removal or mitigation of occupational hazards. It is earnestly to be hoped that other companies will follow this example by studying the conditions under which their workers are employed, and, by removing unnecessary risks to health, gain thereby not only increased efficiency and economy of production, but do their share toward ameliorating the needless burden of illness and suffering.

CONDUCT A BANK FOR EMPLOYEES

* * *

Union Malleable Iron Company, East Moline, Ill.

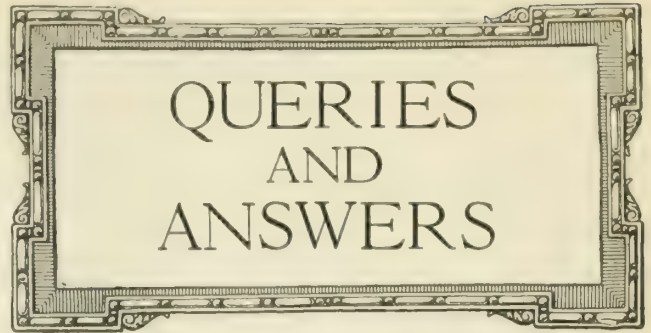
DATA FURNISHED BY MR. J. L. SIMMONS, Secretary and General Manager.

We have a well-equipped emergency hospital, which is in charge of competent men. We have a sick benefit fund, employees paying three-fourths and the company one-fourth for its maintenance. The fund costs each employee approximately \$4 per year, which covers doctor bills, hospital bills, and operations, and provides \$1 per day benefit after the first week's illness.

We also have for the employees a convenient banking system. We request employees to start a saving account with any bank they may designate. We explain that, as it is not convenient for them to go to the bank once a week to make a small deposit, we will place in the bank for them any amount they wish each week, they having the privilege to change the amount as they may desire. The amount is entered up in the book in their own name, the only requirement being that they present the book on the morning of pay day, so that the company can send the book to the bank with the amount they wish deposited. We have found that this is of great benefit to the men, and a large number have taken advantage of this method of saving.

The Prairie du Chien Sanatorium, Prairie du Chien, Wis., has recently opened a new surgical department, with accommodations for 30 patients in single rooms and 2-bed wards. Some of the rooms have private baths. Beds that can be raised to a height of 5 feet or lowered to within 1 foot of the floor are a feature. The construction of the building is along the most sanitary lines, including the elimination of angles where dust would be likely to accumulate. A system of baseboard lighting, which does away with the light from ceiling lamps streaming through the transoms of the patients' rooms at night, has been installed. The walls of the operating room are tinted in gray.

Contract has been awarded by the Presbyterian Sanatorium at Albuquerque, N. M., for the erection of a two-story addition. The first floor of the building will be arranged for a dining room, serving room, and kitchen. The dining room will have a capacity of 110 patients. The second floor will be divided into sleeping rooms.



Cost of Building and Maintenance

To the Editor of THE MODERN HOSPITAL:

We are considering the erection of a 50- or 100-bed clinical hospital, and we are informed that you can furnish us reports or an outline of the estimated annual expense of maintenance. If such is the case, we shall be glad to hear from you.

A TRUSTEE.

In our hospitals we are demanding more in the way of service now than ever before, and no good hospital can avoid giving service to the sick in step with the demands of modern medicine. This means a laboratory of pathology; a first-class x-ray department; a good dietitian and facilities for her work, because we are substituting special feeding of the sick for the drug therapy of a former day. The net result is that our hospitals are costing more than they used to cost, and we think if we were in your place we would figure on approximately \$2,000 per bed for the building, or even a better way would be to figure on about 30 cents per cubic foot of the hospital, taking foundations and roof, porches, sun parlors, etc., into the question; and we would figure on about \$2.50 per day per patient for the cost of maintenance, and we would figure on the total capacity of beds in this arrangement.

If you take these figures, you will be entirely safe in approaching the problem of financing your hospital previous to beginning work on it. You will probably be able to cut here and there, and, if actual necessity comes, you will be able to materially reduce some of these estimates, but you will feel far safer and you will have a better hospital, and it will be of far greater service to the sick in your community, if you figure on the estimates we are giving you.

What an Annual Report Should Be

To the Editor of THE MODERN HOSPITAL:

Do you know if there is a standard form of annual report which has been adopted by hospitals? If not, could you recommend the report of any particular hospital, preferably municipal, as a model?

The Public Health Association a few years ago proposed the adoption of a certain form of annual report for city health departments. This is being generally adopted, and furnishes the data that is of interest to other communities. Any information furnished will be greatly appreciated.

A WESTERN MUNICIPAL HOSPITAL.

There is no accredited or standard form of annual report that we know about, and we hesitate to send you a sample of any of the municipal hospital reports that we have, because all have serious faults.

It seems to us that there can be no standard form of annual report for the reason that different hospitals have different purposes to serve in getting out such a report. The general hospitals that are looking for money want to show what they have already done for the money that has been expended in them, and most of these hospitals, in their attempts at such a showing, go too far and include a list of the diseases treated, and pile up tables of figures

that are never read, and that detract from the value of the book to the extent that no attention is paid to it.

It seems to us that municipal hospitals have a somewhat similar purpose to serve, but in a little different way. The best thing in an annual report of a municipal hospital is a short, crisp story by the superintendent of the hospital, who will tell, rather graphically and not in figures, what his hospital has done during the past year, and he should emphasize the necessity for a higher order of service and consequently the appropriation of larger funds by the financial body to which he must look for appropriations. His story ought to have a large element of a "human note" touch to it, and it would not be a bad idea to cite specific cases of poverty, coupled with disease, in which the hospital did a service of which the community ought to be proud. The financial statement of the year, with the number of patients treated, number of days' treatment, the per capita cost, and an explanation of what that cost actually included—of course these things must be a part of the report.

The Minneapolis City Hospital compiles an annual report that is largely statistical, but the superintendent of the hospital prepares, every once in a while, quite a story for the newspapers, and he gets it up in very attractive form, with all sorts of heart throbs and thrills in it, and discusses the human side of the hospital's activities. The local newspapers are glad to publish these stories, and since it has been the custom to get them out the hospital is very much more popular with the public and has very little difficulty in getting what money it needs. Before that it was unpopular, and appropriations were made grudgingly.

Partnership X-Ray Department

To the Editor of THE MODERN HOSPITAL:

We have a well-equipped x-ray department, but our hospital, we think, is too small to permit us to have an all-time salaried director. We have about determined to make some sort of partnership arrangement with one of our doctors who has had experience in x-ray work, but we hardly know just how to get at an equitable division of the earnings of the department. Can you help us out?

A MIDDLE WEST HOSPITAL.

This inquiry was submitted to Mr. A. B. Tipping, superintendent of Touro Infirmary, New Orleans, who, just recently, has been engaged in figuring out the results of such an arrangement. Mr. Tipping replies as follows:

We have a system in this hospital which has worked very equitably, but, as the volume of work performed by our radiologist is probably larger than would be required of your radiologist, you could not make the same exactions as we are in a position to make. Nevertheless, our system may give you a guide for regulating your department. When making the agreement with our radiologist, we stipulated that he should do no x-ray work outside of Touro Infirmary, and that this institution would render all bills, whether to patients in the hospital or to patients sent to our radiologist by other physicians on the outside. Therefore the total income of our radiologist is received from his work in this institution. It was not our desire to make a profit on the department, as the large amount of free work required of the radiologist (for which, of course, he receives no direct compensation) necessitated the holding out of strong inducements for him to remain at this institution. I, therefore, estimated before making our contract with the radiologist, as nearly as possible, the exact expenses for the maintenance of the department, including the purchase of x-ray plates, chemicals, power, and a technician, and, basing this on the aggregate income which

the institution and the radiologist separately had previously received, found we could afford to give the radiologist 70 percent of the actual gross receipts up to \$800 per month, retaining 30 percent of the \$800 for the working expenses of the department, plus interest on the valuation of our equipment and an allowance for depreciation. If in any one month the income exceeds \$800, the excess amount is divided equally between the radiologist and the infirmary. We have found this arrangement to work very satisfactorily, and the institution has more than paid the expenses of the department under this system, in spite of the fact that about 70 percent of the work of the department is done free of charge.

With a smaller organization it would probably be necessary for the institution to retain 50 percent of the gross receipts to pay expenses, and I believe that by dividing the receipts in this way, instead of paying a regular salary to a radiologist, you will obtain a more efficient service from him.

The presence of a radiologist in a hospital may be required at any time during the day or night for emergency work, etc., and it is therefore advisable to require the radiologist to come whenever called on to do so in addition to having regular hours daily to be in attendance to do the routine work.

It may be argued that giving the radiologist a certain percentage of the gross receipts might tend toward extravagance on his part with plates, etc., but this is more than counterbalanced by efficiency, for if a doctor feels that for every plate he uses a certain percent of his income will be cut off, it is possible that he will not use as many plates as are actually necessary for the case.

A. B. TIPPING, Superintendent.

Responsibility for the Scientific Work

To the Editor of THE MODERN HOSPITAL:

We are contemplating the appointment of a chief resident physician (salaried)—the term of service and what we intend or would have probably to pay a good man has not been definitely fixed on as yet.

I should like very much to have your view on this subject, and also just what work, particularly of a surgical nature, is allotted by the attending surgeons to the members of the intern staff. Our men here contend that they should be permitted to perform minor and major operations in the fourth month of their one year's service. This request our attending surgeons will not, of course, accede to, and consequently we are confronted with a staff walk-out—that is, all the members of the resident staff have threatened to resign unless this request is acquiesced in.

Could you commend some young man to us who, in your opinion, would be a desirable and successful incumbent of the office of chief resident, and how much do you think we should pay him? This, I understand, you will, no doubt, have to approximate, as you are not aware of the conditions here and the nature and amount of the work.

A PENNSYLVANIA HOSPITAL.

We could not tell just what work a resident surgeon should be called on to perform unless we knew more about the conditions that exist in your hospital. If it is a public hospital, supported by public funds, and it has only indigent sick, then we think the medical staff should determine the capacity of a resident physician or an intern to do surgical work; but if it is a so-called semipublic hospital, supported in part by earnings from pay patients, and you have a staff that supervises and performs the free service, then we think it is all wrong to allow either a resident physician or surgeon, or an intern, to do any surgical work except in the presence of and under the direct supervision of some resident attending surgeon, and it makes no difference whether the man has been in the hospital four

months or two years. You have no more right to allow a beginner to operate independently on your indigent sick than you have to allow him to operate on paying patients, because in this day of modern medicine we are assuming that the poor are entitled to just as good surgical treatment as the rich; besides that, the attending medical staff, including the surgical staff, of a hospital has an obligation resting on it to see that proper surgical work is performed in the hospital, and, whenever the administration of the institution assumes that responsibility by having its own salaried officer take the place of the medical staff, in so far as responsibility is concerned, the hospital is riding for a bad fall. Our idea is to insist on the responsibility residing in the attending medical staff, and, when it does so reside, these men will give you a service far more efficient than if the hospital administration is relieving them of that responsibility.

We make a very clear distinction between administration and medical work; we do not think the medical staff has any business to interfere with your administrative affairs. We would play safe on the scientific side by reposing confidence and placing responsibility in the medical staff for all the medical and surgical work that was done in the institution; then we could hold them to a strict accountability for any bad work that was performed. Medical men throughout the country appreciate the drawing of the line in this way.

If you or your board of trustees appoints a resident medical man, and gives him authority and reposes responsibility in him for the medical and surgical work performed, then you relieve your really responsible attending medical men, which we regard as bad business.

We do not happen to know of a young medical man who would serve your purpose, but we think if we were in your place we would take the matter up with Dr. J. M. Baldy. Dr. Baldy is extremely anxious for the efficient working of the hospitals of your state, and he is trying to coordinate hospital work and medical school work, and we think he would have on his list desirable men for the place you are thinking about filling; besides, it is an excellent thing to keep on the side of and on good terms with Dr. Baldy and your hospital board.

Another Doctor's Patient

To the Editor of THE MODERN HOSPITAL:

The question of ethics between doctors has come up in our hospital, and the administration seems to be in a position where it will have to decide. One of the doctors was called in to assist at an operation, and afterward visited the patient in her room and left orders with the nurse without the consent of the attending surgeon or the patient's family. If this had been the first instance of the kind, it would have been passed over, but this same doctor is making a practice of doing the same thing. What is correct ethics in such a case?

A SOUTHERN HOSPITAL.

There are some pretty well-defined standards of ethics to regulate the conduct of physicians toward the patients of other doctors. Without question, it is wrong and in violation of medical ethics for a physician to visit another physician's patient without an invitation from, or at least the consent of, the attending physician, and it makes no difference what the patient himself or the family of the patient does or thinks or wants; and a doctor in a hospital, whether he be a staff member or otherwise, has no business in the room or at the bedside of the patient of another physician, and he has no business to look over the patient's charts, and certainly has no right to give orders to another physician's patient.

But the situation is vastly changed when a physician has been called in to a case with another doctor and has performed a surgical operation, no matter how simple or how minor an operation it was. For example, a doctor attending a case might call in a surgeon to open a very simple abscess, and the surgeon might open the abscess. Then something might go wrong with the patient. For instance, it might be a streptococcus infection, and through the incision made by the surgeon there might be a streptococcal infection that would kill the patient. In such a case the surgeon would be blamed and not the regular attending physician, because, when the surgeon was called in as an expert, he is obliged to assume the responsibility for what is done in a surgical way, and, no matter what the wishes of the attending physician would be in such case, the surgeon has a certain responsibility, and it seems to us he would have a right to insist on knowing what was happening to that patient after the operation was performed; and it appears to us it would be his duty to see that the case was properly dressed and that proper surgical attention was given. If there were an accident in such a case, following even a very minor surgical operation, the surgeon would be charged with malpractice and not the attending physician, and the surgeon would get all of the odium for any indirect happenings in the case, so that you can readily see that the surgeon has not only a certain right to know what is happening to that patient after he has performed his surgical operation, but there is a very grave responsibility resting on the surgeon as well. Of course, the ethical surgeon would do the thing in an ethical way, which is almost unexplainable in writing, but which is thoroughly understood among medical men. It is really the conduct of one gentleman toward another. It is assumed that the attending physician and the surgeon who was called in on the case were friends, or the surgeon would not have been called in by the medical man; if that were the case, then the surgeon would expect the attending physician to invite him to look after the case surgically until the surgical part of the case was ended. If the medical man failed to do that and resented any further presence of the surgeon after the operation was over, then it seems to us the surgeon would refuse to go into consultation with that man again.

It is a vastly different thing when a physician is merely invited to assist at an operation. In that case he has no rights in the case, and has no business to go beyond asking the man who called him about the patient's welfare; that would be mere professional and personal interest.

The Association of Hospital Superintendents of Philadelphia has presented to the city director of public safety a resolution requesting the cooperation of the police department in an effort to eliminate ambulance speeding, and asking that all cases of this nature be reported to the hospitals. The resolution points out that the lives of pedestrians are as valuable as those of the patients in the ambulances, and declares that, if speeding can be stopped in no other way, gongs and bells will be removed from the ambulances and the regular motor horns installed in their places. The ambulance gong should be used only to get precedence in a congestion of traffic, the superintendents say.

Miss Mary Kelly, for the last two years superintendent of the Hoquiam General Hospital, Hoquiam, Wash., has resigned to take an extended rest at her home in Portland, Ore. She will be succeeded at the Hoquiam institution by Miss Isabella Musgrove, who has been assistant superintendent. Miss Musgrove will be assisted by Miss Marjorie Eaton, of the Good Samaritan Hospital in Portland, as head nurse.

NEW INSTRUMENTS AND EQUIPMENT

VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor.

Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

Hipwood Pneumatic Crutch

Crutches, though used for hundreds of years, have really been changed but little in design, and until recently practically the same type of crutch has been standard the world over. As there are many points of improvement in the Hipwood pneumatic crutch, here illustrated, it should be of particular interest, since all hospitals are called on to furnish crutches from time to time. It is claimed by the designer that there can be no discomfort, such as lameness of the shoulders and arms, jolts and jars, pressure paralysis, etc. This feature, as stated, has been overcome by means of a pneumatic support for the horn of the crutch. This support acts, in fact, as a shock absorber, so that, when the weight of the body is thrown on the crutch, there is a pneumatic cushion action, thus breaking the shock to the arm of the patient.

The hand hold is also of unique design, which is so made that it can be adjusted as to height, and, being mounted on a pair of brackets, extends outward from the crutch proper. This permits the patient's arm to be carried in a perfectly natural position, eliminating the cramped wrist often complained of by those who use crutches. The tip is mounted upon a ball-bearing swivel. It is claimed that this entirely does away with the twisting of the head of the crutch in the arm-pit.

Fig. 1. Hipwood pneumatic crutch.

This improved crutch has recently been placed on the market, and can be had from the various dealers in hospital supplies.

Sanitary Waste Receptacle

Surgical supply houses are now offering a new waste receptacle under the name of the Hygeia can. As will be seen from the illustration, the Hygeia can consists of a pressed steel frame in which rests the pail or container. The cover is attached or detached from the frame by a simple turn of a thumb-screw. When attached to the frame, the cover opens automatically by pressure on a foot pedal. When the pressure on this pedal is released, the

cover closes, sprinkling a powerful yet odorless disinfectant over the contents of the pail, thus arresting decomposition and destroying objectionable odors.

The handle is on the outside, and may be used for carry-



Fig. 1. Hygeia sanitary waste receptacle.

ing the pail only or both pail and frame, and by an ingenious device the handle, when thrown forward, acts as a lock and holds the cover tightly closed. The outfit is made of steel and finished throughout in white enamel.

A New Restraint Apparatus

Under the name of the Lawrence Harmony restrainer a new apparatus has recently been put on the market which

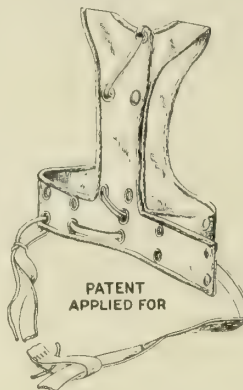


Fig. 1. Lawrence Harmony restrainer.

is here illustrated below, and from these illustrations it will be seen that this is a distinct improvement over the restrainers that have heretofore been in use for the purpose of preventing irresponsible patients from leaving their beds. There is nothing about this new restrainer that suggests a straight jacket, even in a mild way. There are no knots, ties, or loose ends within reach of the patient, and it is impossible for the latter to leave the bed or reach a point of attachment of the fastening arrangement at the foot of the bed, although the patient is free to rise to a sitting position or turn over on either side. The



Fig. 2. Restrainer applied, patient in sitting position.

restrainer allows the patient free use of both arms and feet, and does not subject him to the inconvenience or un-

necessary restraint incident to the use of straps as ordinarily applied.

While this is a radical departure from the present-day methods, the inventor claims that he has fully demonstrated the fact that, no matter how powerful the patient may be, there is no possible chance for him to escape from



Fig. 3. Restrainer applied with patient resting on side.

the apparatus, although it restrains without binding the hands or feet.

It is obvious, therefore, that the Lawrence restrainer will be of great value in the treatment of patients suffering from delirium in typhoid, pneumonia, and all temperature diseases where restraint is necessary, because the patient can be sponged and the gowns and bed linen can be changed without removing or even readjusting the apparatus. For patients who are violent and whose arms and feet must be fastened, a simple additional arrangement is provided for that purpose.

Utility Chassis

This device has been designed in order that any ordinary rocking chair may be quickly changed into a comfortable wheel-chair. The two illustrations show quite plainly the construction of the chassis and its application. An ad-



Fig. 1. Utility chassis.

justable steel frame, rigidly constructed, is mounted on a set of rubber-tired wheels of small diameter. On the front of the frame is a foot-rest, and attached to it an adjustable arm. The purpose of this arm is twofold—it can be used either as a means of drawing the wheel-chair, or can be fastened in a vertical position, and with the tray attached

serves as a bedside table, bookholder, etc. The rocker can easily be attached in a few moments. When not in use, the



Fig. 2. Utility chassis attached to ordinary rocking-chair.

frame can be folded up so that it occupies no more space than an ordinary suitcase.

Adjustable Artificial Limbs

In a former issue of THE MODERN HOSPITAL we illustrated and described several types of adjustable peg legs which were invented in Germany soon after the European war started. These temporary peg legs are used extensively for the purpose of enabling soldiers who have had the misfortune of losing one or both limbs to leave their beds much sooner than would be the case without such apparatus, and also make room in the base hospitals for the ever-increasing stream of wounded men who have to be taken care of promptly. The use of such temporary artificial limbs also prepares the stumps for the proper artificial limb to be worn permanently later on.

The demand for artificial limbs in all the countries at war has become so great that they are unable to meet the requirements promptly, and we have been informed that extensive orders for limbs have been placed in this country. One can imagine, however, that to make artificial limbs in quantities and in a number of different sizes, and then ship them abroad and try to fit them to the unfortunate cripples, cannot be a very satisfactory procedure, at least not from the point of view of the men who have to wear the artificial members.

To overcome this difficulty of securing a proper fitting limb, a New York artificial limb manufacturing concern has invented a new limb which is adjustable in every direction. Fig. 1 illustrates the leg for amputation below the knee. The open space just above the ankle shows where the upper brace (holding the thigh piece and stump socket) slides on a ratchet with the lower brace (holding the ankle joint and foot). The adjustment is so made that by loosening the four set-screws (two on each side), the leg may be lengthened or shortened as desired. Fig. 2 illustrates the lateral adjustment, which is made of two halves, and at the ends of each of the two bands (upper and lower) are vertical slots, which give the play for the lateral adjustment. A set-screw in each double slot fas-

tens the two ends. This method allows an independent adjustment, which is very important, because one may require a full opening on the top of the socket for the upper part of the stump, whereas the lower part of the stump, having gradually atrophied, may require only a very slight adjustment, if any. As the original shape of the socket is anatomically correct, this adjustment allows a large margin of play, the patient never requiring any artificial

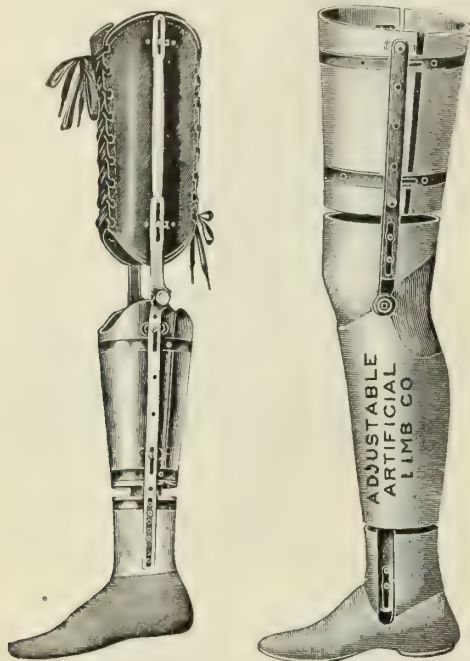


Fig. 1. Adjustable artificial limb for lower amputation. Fig. 2. Adjustable artificial limb for upper amputation.

means of stuffing, which is always very uncomfortable, and especially almost unbearable in hot weather, besides being unsanitary.

For above the knee amputation the ratchet attachment as shown in Fig. 1 is used just above the knee joint as well as the ankle (Fig. 3). The sockets for the lower as well as the upper amputation are made in two halves, and

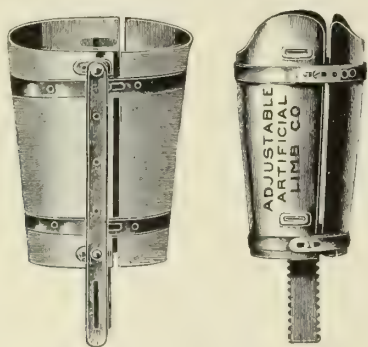


Fig. 3. Sockets for upper and lower amputation, showing lateral adjustment and method of extension.

are so constructed that adjustment can be made both on top as well as on the bottom. Making this adjustment will occasionally throw the socket out of center, but this may easily be rectified by horizontal slots, which enable one to again place the upright steel bars in the center of the socket.

After a careful examination of the new limb by the writer, he would judge that from an assortment of six limbs, three sizes for the right and three sizes for the left side, a dealer of such apparatus would be able to at once fit anyone who may be sent to him by a surgeon. The

same ratio as regards sizes would hold good if these limbs were kept on hand in large quantities for the use of crippled soldiers. The advantages of these new adjustable limbs must be especially apparent to surgeons in cases where growing children have to be supplied.

The Rieber Roentgen Converter

The roentgen unit here illustrated has been designed in such a manner that it combines many desirable features in

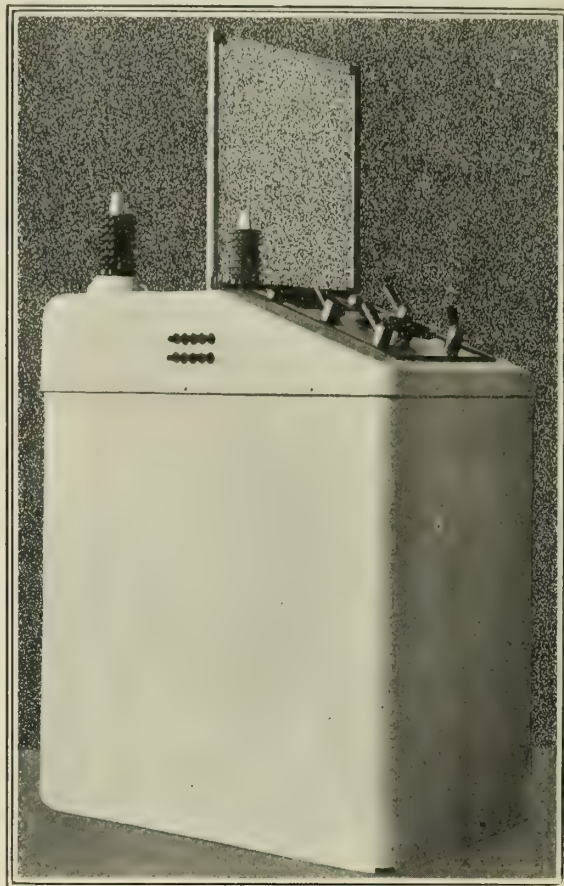


Fig. 1. Rieber roentgen converter.

one machine. The basic feature of the apparatus is the novel system of rectifying the currents delivered to the x-ray tube, thus rendering it positive in action, and extremely quiet running even when heavy currents are delivered. Potentials up to and including 120,000 volts may be obtained. The positive means of controlling this potential, irrespective of the load imposed on the machine by various tubes, has been provided. Additional features are the stabilizing connection for fluoroscopic use and the internal filament control for operating Coolidge tubes without auxiliary apparatus.

The construction of the apparatus differs somewhat from most types of transformers in that the entire high tension system is immersed in oil contained in a steel case. The manufacturers state that this feature assures freedom from insulation failures, which occasionally occur to those who must operate machines in a rather damp climate. There is but one moving part in the rectifying system, and this part is supported on ball bearings which are immersed in oil contained in the casing.

The sum of \$30,500 has been subscribed at Pekin, Ill., to build a community hospital.

MINIMUM LABORATORY EQUIPMENT

List of Needed Things Made by Chairman of New Jersey State Society Committee

There is always considerable discussion as to the minimum equipment of pathological laboratories. In many institutions laboratory supplies have been purchased regardless of cost through laboratory routine, and in many instances the orders have been given by semi-laboratory technicians whose general outlook was narrow through inexperience, or possibly biased by their interest along special lines. In many instances expensive apparatus has been purchased, while some practical appliance would have served the purpose, and to much better advantage.

Dr. J. C. McCoy, chairman of the committee on scientific work of the New Jersey Medical Society, has outlined the minimum requirements for a standard laboratory necessary to care for the general routine work conducted by the average hospital. Dr. McCoy presents the following tentative equipment:

EQUIPMENT FOR PATHOLOGICAL DEPARTMENT

- 1 microscope equipped with a 1/3, 1/5, 1/12 oiled immersion and Abbe condenser.
- 2 eye pieces.
- 1 triple nose piece.
- 1 mechanical stage. A dark stage with a suitable light for same is also desired.
- 1 microtome, either paraffine or celloidin. A freezing attachment for the same, or a freezing microtome as a separate instrument for rapid section work, is desired.
- 1 incubator, either gas or electrically operated, of sufficient size to accommodate the bacteriological and serological work of the laboratory.
- 1 sterilizer of the Arnold type.
- 1 autoclave of sufficient size to meet the needs of the bacteriological and serological divisions.
- 4 animal cages for the housing of laboratory animals.
- 1 pair balances with one set of metric weights.
- 1 hemoglobinometer.
- 1 Thoma-Zeiss counting chamber.
- 2 white cell blood pipettes.
- 2 red cell blood pipettes.
- 1 iron burdette stand.
- 2 iron tripods.
- 6 squares of iron wire gauze.
- 3 Bunsen burners.
- 1 centrifuge (electric preferred), with graduated and plain centrifuge tubes, and Babcock attachment for milk analysis (fat determination) is also desired.
- 1 iron support with three rings.
- 1 Stokes water still.
- 1 filter pump.
- 1 spatula.
- 3 wire baskets for test tubes.
- 1 set of cork borers.

GLASSWARE

- 4 gross slides.
- 3 ounces cover glass.
- 2 dozen staining dishes.
- 1 pound assorted glass tubing.
- 1 pound assorted glass rods.
- 6 nests beakers.
- 3 nests evaporating dishes.
- 2 gross test tubes 4x½ inches.
- 2 gross test tubes 6x¾ inches.
- ½ gross glass-stoppered tincture bottles (assorted sizes).
- 2 dozen glass-stoppered salt mouth bottles (assorted sizes).
- ½ dozen funnels (glass), assorted sizes.
- 1 dozen 1,000 c.c. Erlenmeyer flasks.
- 2 dozen 500 c.c. Erlenmeyer flasks.
- 2 dozen 250 c.c. Erlenmeyer flasks.
- 1 dozen 120 c.c. Erlenmeyer flasks.
- 2 10 c.c. graduated cylinders, graduated in 10th c.c.
- 2 25 c.c. graduated cylinders, graduated in 10th c.c.
- 2 50 c.c. graduated cylinders, graduated in 10th c.c.
- 2 100 c.c. graduated cylinders, graduated in 10th c.c.
- 2 200 c.c. graduated cylinders, graduated in 10th c.c.
- 2 500 c.c. graduated cylinders, graduated in 10th c.c.

- 2 20 c.c. pipettes, graduated in 10th c.c.
 - 4 10 c.c. pipettes, graduated in 10th c.c.
 - 6 5 c.c. pipettes, graduated in 10th c.c.
 - 2 dozen 1 c.c. pipettes, graduated in 10th c.c.
 - 1 dozen 1 c.c. pipettes, graduated in 1/100 c.c.
 - 2 50 c.c. burettes, graduated in tenths.
 - 1 package lens paper.
 - 12 slide boxes or one slide cabinet.
 - 1 dozen test tube brushes.
 - 1 chemical thermometer, 200 c.
 - 1 Doremus ureometer.
 - 1 Esbach albuminometer.
 - 1 urinometer.
 - 1 bell (glass) for microscope.
 - 1 balsam bottle.
 - 2 dozen Petri dishes, 100x10 mm.
 - 2 dozen fermentation tubes.
 - 2 Coplin staining jars.
 - 1 wash bottle.
 - 1 package labels for slides.
 - 1 package labels for bottles.
 - Filter paper.
 - 2 tube racks.
 - 1 card index for permanent filing of pathological reports, to be cross-indexed.
 - 1 copper water bath for test tubes, also fitted with rings.
- Approximate cost of this equipment probably within \$600.

BEDSORES IN THE HOSPITAL

A Patient's Experience for Six Years on the Flat of His Back

Much has been written on the question of bedsores, but, so far as I have read, it has always been from the pen of a doctor or nurse, and possibly the viewpoint of a patient may be of some interest to the readers of THE MODERN HOSPITAL. I shall attempt nothing exhaustive, but shall merely record a few points gathered during the six years spent in three well-known and excellent institutions in the United States and Canada.

The conditions under which I was laid up were trying, and, save in the case of a paralytic, could hardly have been more conducive to bedsores. During two hot summers I was encased in plaster from below the knee to the beginning of the ribs. When this was off, I was in extensions, with hips so acutely painful that I was unable to turn on my side in the slightest degree. On two occasions I lay for seven weeks strapped on an iron and leather frame, where the lower part of the back could be reached only with difficulty. When I say that during all this period of confinement to bed I had only one semblance of a sore (and that one which I was powerless to prevent), it will be seen that we were well repaid for adhering to certain principles established at the outset, and others added as the result of experience.

The bed sore in question came after an operation on the hip. To prevent infection, the whole area about the hip was practically sealed with a rubber preparation. Unfortunately, the coccyx was included, so that in the few days following the operation the pressure upon this point and the presence of blood, which the rubber held from escape, combined with the body heat to create an ideal condition for the development of a sore. The skin will rarely fail to respond negatively to such conditions. But, apart from this experience, I spent five out of nearly seven years on the flat of my back without a sore of any kind, and at the end of that period was stronger and healthier than when I first went to bed.

How did it so happen? My father was a doctor, and to certain definite principles he established in my mind I attribute the later success when he was not there to guide. He always impressed on me the necessity of adhering to a rule only insofar as common sense and pre-



Mr. E. Laphorn Smith and his business partner in their "office" at Mercy Hospital, Chicago. These two young men, physically incapacitated, concluded to go into business, using their jointly occupied hospital room for an office. They were quite successful as literary agents and authors.

vailing conditions were in accord. This brings to mind the case of a nurse who had been taught in her training days to mix a certain preparation upon a marble slab. When, out on a case a year later it was necessary to prepare the same mixture, she telephoned innocently to the doctor who had instructed her, to inquire where such slabs could be obtained. Amusing, but also illustrative of the application of instruction without the cooperation of brain cell.

A patient is lying flat on his back in midsummer, literally bathing in a pool of his own perspiration. It is one of those cases where any lifting or turning movement is both painful and undesirable. The nurse laboriously changes the wet sheet and proceeds to bathe the back with alcohol. Temperance alcohol, as a rule! Half an hour after this attention the patient's back is again wet and uncomfortable. In the first place, the diluted alcohol neither dried nor antiseptitized the pressure areas, and, secondly, even if it had, that overestimated article, the rubber sheet, would have held back enough perspiration to again dampen both the sheet and the patient's back; and the nurse's effort would have been in vain. Yet in the majority of institutions they never think of removing the rubber sheet in such weather and under such conditions, and replacing it with absorbent material that will keep the patient's back free from any collection of moisture. Any danger of damage to the mattress can be met by local means, or by the use of a rubber strip, as the occasion demands.

An institution is not altogether to be criticised because economic necessity forces it to greatly dilute the alcohol used for bathing purposes, but why use a watery alcohol when common sense tells us that a powder with a generous proportion of boric acid will be infinitely more satisfactory and efficacious in dealing with the skin in hot weather. In my own case we kept the skin in good condition all through the long, hot summers, even though encased in a cast, by blowing in powder daily with an insect blower.

Turning now to the question of pressure, in the region of the base of the spine there is little to record by way of suggestion in this section. As far as I have observed,

most hospitals keep a pillow under the small of the patient's back, and so relieve to a great extent the pressure on the bony prominences of the spine and pelvis. A very effective alternative, however, may be found by placing this pillow just below instead of above the hips. Pressure is often better reduced in this way, and, in addition, it will keep the patient from continually sliding down in the bed.

The heel, unfortunately, is a neglected member as far as I have observed; not neglected, it is true, once it is red and inflamed. The nurse makes a ring for each heel, and after four or five days the stinging, burning feeling passes away. But why any of that discomfort? A small pillow under each ankle (not under the heel, as I have often seen), or an ordinary pillow under the calves, renders a sore heel a virtual impossibility, and the nurse is relieved of all anxiety from that source.

These words are written with no thought of revolutionizing hospital treatment, but are the mere observations of an invalid of seven years' experience—six in hospitals and five on the flat of my back.

E. LAPHORN SMITH,

Bank of British North America, North Battleford, Saskatchewan, Canada.

THE "BIG BROTHER" MOVEMENT

An Agency That Has Had Much to Do With the Guidance of Boys—Some of Its Principles and Policies

When Mr. Ernest K. Coulter addressed the members of the Men's Club of the Central Presbyterian Church in 1904, probably no one had any conception that the suggestion which he made at that time would grow to the huge proportions that it has now attained. His "Big Brother" idea was that each one of the forty men present should become the friend and adviser of one unfortunate little boy. Until that time the only help accorded to children who had shown a wayward tendency was to take them from their parents and send them to an institution. Formerly the machinery of the law had but one function—to punish—and for thousands of years we have answered "yes" to that world-old query, "Am I my brother's keeper?" The keeping, however, had been intrusted to those in charge of jails, prisons, reformatories, and asylums. Now we were to realize that the keeping could not be deputized—that we are our brother's keeper, personally and individually.

The idea of probation was being tried and proving successful. Probation officers, however, could not give as long supervision as was sometimes necessary. They were also handicapped in being unable to see their probationers as often as they might wish. Therefore, this auxiliary force was welcomed by the children's court and by the probation officers, and has been made welcome ever since.

There was never any intention to supplant the work of the salaried officers, but rather to assist in carrying out the reformation indicated as necessary by the court and by the probation officer. The Big Brothers, then, were to start in a very small, cautious manner, trying out the scheme, which was big in its possibilities. The early struggles of those forty men were discouraging. It was diffi-

cult to establish confidence in the minds of parents and in the hearts of children. To the persistence of those men is due in no small measure the present success of the work.

In 1911 the Benevolent and Protective Order of Elks gave the idea its official sanction, and was the first fraternal organization to take it up as part of their work. The Big Sisters were organized in 1912 under the leadership of Mrs. William K. Vanderbilt, and still continue to render efficient aid to unfortunate girls. In more than one hundred cities throughout the United States about 15,000 men are doing some form of Big Brother work, ranging from gifts of Christmas baskets to the more intensive work of New York, St. Louis, Philadelphia, Chicago, New York, and Dayton. These men are all by instinct, and many of them by experience and training, well adapted for this work. All are urged to study more thoroughly boy life as found in the various boys' clubs, gymnasiums, and settlement centers of the city. For the purpose of this study, the office keeps on hand a list of the various activities, which serves also our convenience in suggesting suitable recreation for the boys, and also lists of books and magazine articles dealing with boys. Theories are made up of an infinite number of details. By coming so directly into touch with what might be called the little things of a little boy's life, we are better able to form theories more comprehensive than would be possible otherwise.

It is difficult to adhere to the original idea to which the organization is pledged, which is to discover the needs of unfortunate boys, to bring them in touch with good influences, and to make that contact permanent. Viewing, as we do, the many needs and the infinite opportunities, it is a very great temptation to interpose ourselves in the work that belongs to others. There are many worthy causes which would serve to distract from that single purpose, but, on analysis, many of these are found to properly belong to the work of organizations which already exist.

Originally the entire number of boys added to our list were discovered in the Manhattan Children's Court, probably because of Mr. Coulter's official connection. With greater publicity have come greater opportunities in knowing the needs of boys through the Board of Health, Bureau of Attendance of the Board of Education, Prison Association, Children's Aid Society, Society for the Prevention of Cruelty to Children, the social service bureaus of various churches and hospitals, orphan asylums, New York Juvenile Asylum, House of Refuge, Charity Organization Society, Association for Improving the Condition of the Poor, parents, boys themselves, and business firms. Probably 99 percent of these are the children of very poor parents.

A great number of boys are subnormal mentally, morally, and physically. It is regrettable that our public school system has not yet fully adapted itself to the needs of a class that ten or twelve years ago was not forced to acquire an education. These children are now compelled to conform to a curriculum that was formulated without them in mind. The "thing-minded" child is not receiving his just due, for he is condemned to hours of idleness in ungraded classes, where his mind and will deteriorate. Tainted heredity, bad neighborhood, poverty, and ill health play no small part in the causes of juvenile delinquency. It would seem almost impossible to change a boy's environment, but this has been done in many cases by making a change in the parents' employment or by a rearrangement of domestic conditions. Parents themselves are very largely at fault for the misconduct of their chil-

dren. Notably is this true in the case of intemperate, lazy fathers or mothers. Comparatively few parents realize the subtle changes of adolescence. The child, often nurtured on a diet of fear, attaining the age of reason and judgment, demands different treatment. The parents cannot, or will not, adjust themselves to the new condition; misunderstandings, quarrels follow, and the boy is "incorrigible." Experience forces us to conclude that it is wellnigh hopeless to attempt the reformation by Big Brother influence of a wayward boy who is mentally over sixteen years of age; so too, it is necessary to realize that failure must be the end of our attempts to assist mentally or morally defective boys. Authorities are by no means agreed in regard to mental defectiveness, and we feel that there can be found no better object for study and experiment than this problem. It is not sufficient to test, measure, and label defective children; yet very little else is done for them at present. It is properly a problem for institutional or laboratorial study. It is more than probable that, were the necessary funds forthcoming, pathological treatment could be given which would aid thousands of cases now deemed helpless. It is pitiful to realize that we are impotent, and that we must see hundreds annually added to the already huge army of incompetents. We can only hope that some one will make it possible for physicians to have an opportunity to study and to treat all grades of mental and moral defectiveness from the imbecile up to and including the moron. About 90 percent of all boys are, however, amenable to good influences, and very nearly that same percentage meets with success. The big gain has been, of course, in the redemption of the boy, but the monetary saving to the city and state is of no little consideration.

The first step in our method is, of course, gathering of data, which we have found to be best accomplished by a salaried worker. In this way essentials are found and irrelevant matter is discarded, uniformity is maintained, and false information is eliminated. Not only are the statements of boys and parents taken, but often the case history of the Association for Improving the Condition of the Poor, Charity Organization Society, Children's Court, etc., are found to have important bearing. The boy's parents are visited, the objects and aspirations of the Big Brother explained, and the promise of cooperation secured. A Big Brother is then chosen according to geographical proximity, religious sect, and personal characteristics; an appointment is made and a physical introduction follows, either at the Big Brother's office or home. The new-found friend is then in a position to visit the boy's home, make the acquaintance of the parents, and to plan the work to be done. In the meantime the Big Brother has received from this office a transcript of the data gathered and a number of suggestions. The first report from the Big Brother is due two weeks after assignment, and bears especially on the boy's physical and mental equipment and environment. The Big Brother is then advised regarding dental, medical, and psychological clinics, trade schools, gymnasiums, boys' clubs, and Boy Scouts, employment, libraries, savings funds, summer camps, etc.

Financial help to the boy is a matter that receives the most serious consideration of the Big Brothers. Perhaps nowhere else in the world will be found boys more thoroughly schooled in graft. We are forced to realize that we help to pauperize a boy when we supply money or clothing without giving the lad a chance to gain his self-respect by paying for what he receives, either in money or labor.

For several years we have had the privilege of nominating boys to spend two weeks of real vacation at six camps. Probably no other poor boys have the opportunity to have a thoroughly good vacation and at the same time to unconsciously imbibe so much benefit physically, morally, and mentally. The trials of the camp managers, though experienced men, are unusual. Heterogeneous groups of boys, ranging in age from 10 to 16 years, whose only lessons in discipline have been received in the overcrowded public schools, do not provide the best material for organized effort. Add to this consideration the fact that a large proportion have already exhibited a wayward tendency, and one is able to picture the problem. As a result of the contemplation we are forced to admire the patience and kindly firmness that marks the administration of all the camps.

Monthly reports are required from the Big Brothers on the following form:

Big Brother Movement

REPORT FOR MONTH OF November, 1914

BOY'S NAME John Brown

ADDRESS 261 East 65 St.

PLACE A POINT OPPOSITE THE QUALITY AND UNDER THE NUMERAL TO INDICATE YOUR VALUATION OF BOY'S STATUS. JOIN CONSECUTIVE POINTS.

QUALITY	0	1	2	3	4	5	6	7	8	9	10
HONESTY.....											
TRUTH.....											
MORALITY.....											
RELIGION.....											
CLEANLINESS.....											
HABITS.....											
WORK OR SCHOOL.....											
DEMEANOR.....											
REGULARITY.....											
THRIFT.....											

ADD THE SEVERAL VALUES FOR THE AVERAGE 49.5 MAXIMUM 100 POINTS.

VISITS TO BOY.....2

VISITS BY BOY.....3

REMARKS
Account started in
Postal Savings
Boy entered at Trade
school.
Dental work completed.

IF IT HAD BEEN NECESSARY
TO EXPEND MONEY, PLEASE
NOTE AMOUNT

N.C. Sheldon
200-5 Ave.

Blank for monthly reports.

It has been said that it is next to impossible to get volunteer workers to do satisfactory continuous work, but we find little difficulty in getting every man to report regularly.

An average based on reports on 100 boys chosen at random for four months shows:

	Percent		Percent
Honesty	76	Habits	73
Truth	75	Work or school.....	74
Morality	77	Demeanor	78
Religion	67	Regularity	74
Cleanliness	70	Thrift	72

A general average of 73.6 percent—surely not a bad showing for any boy.

The office follows up an assignment for one year, but the Big Brother follows up his boy much longer. Some boys who formed the original "little brothers" are still enjoying the friendship and guidance of their older friend; and some boys have so improved as to have graduated into the ranks of the Big Brothers.

To be a Big Brother needs no organization, of course; but we feel that an infinite amount of good has been accomplished during the past ten years in discovering the

need, bringing the good influences to bear, through the mediation of the Big Brother, and in directing and encouraging the individual worker.

It is undoubtedly true that, in the relation of leader and disciple, the Big Brother gains the greater benefit. We, at the center of the little circle of activity, feel the greatest benefit on heart and mind, and render to God profound thanks for our privilege.

ROWLAND C. SHELDON.
General Secretary Big Brother Movement, New York City.

HOSPITALS AND THE CONTROL OF CANCER

American Society Plans Nation-Wide Campaign in Hospitals to Secure Data for Systematic Study

The American Society for the Control of Cancer confidently seeks the interest and direct assistance of hospital administrators in carrying on the work for which it was organized—namely, "to disseminate knowledge concerning the symptoms, diagnosis, treatment, and prevention of cancer, and to collect statistics in regard thereto." The purpose thus announced when the society was founded on May 22, 1913, is interpreted to include (1) a nation-wide campaign of public education regarding the need of the early recognition and treatment of malignant disease, and (2) the systematic promotion of statistical research in this field. Progress toward both of these objectives will depend, to a large degree, on the cooperation given by general and special hospitals, and their appropriate clinics, dispensaries, record departments, and nurses' training schools. On the other hand, the work of the society, being essentially educational and preventive, in no way touches the primary function of the hospital in the care and treatment of individual patients.

Few organizations devoted to health propaganda have been established in closer alliance with the leading professional associations and individual practitioners. The Society was founded as the direct result of the recommendations of a committee of the American Gynecological Society, heartily seconded by the great majority of other special medical associations of national scope which met with the Congress of American Physicians and Surgeons at Washington in 1913. Subsequently the American Medical Association, the Clinical Congress of Surgeons, the Western and Southern Surgical Associations, and many state and local societies have indorsed the movement, and, what is more important, have gladly identified their own cancer committees with the national and local governing boards of the American Society for the Control of Cancer.

The basic principle of this campaign is to attack this great and increasing scourge of the race by bringing to wider practical application our present extensive knowledge of cancer. It is too often and too thoughtlessly said that nothing is known about the disease. On the contrary, while much is still to be learned about the ultimate nature of the malignant process, there exists a great body of accumulated facts which are familiar to practitioners of the progressive type, but which, in their practical significance, have by no means filtered through to the general public. The leaders in this movement believe earnestly that it is necessary for the people to know the elementary facts and established conclusions about this threatening disease. They believe that only by turning on the light of human reason and acquainting the public with the danger signs of cancer, often so painless and insidious in its approach, only by telling the patient in concrete figures how much greater is the chance of cure in the early stages, only by these methods, so successful in the war on tuberculosis,

can we hope to make definite headway against cancer pending the acquisition, through patient laboratory and clinical research, or a more satisfactory insight into the primary cause and rational treatment of malignant disease.

Now, the hospitals are the great repositories of the facts which are to be collated, digested, and forged into convincing messages of hope to the public. In their operative clinics, radium and x-ray departments, and in their volumes of case histories, are rich mines of data which have never been adequately studied. In the first place, this material ought to be dug up and utilized in the scientific investigation of the cancer problem to a far greater extent than has yet been done. In the second place, many prominent students believe that, if fair statements of the results secured by modern methods in the treatment of malignant growths could be given wide circulation among the public, they would go far toward changing the exaggerated and disastrous attitude of pessimism and ignorance about cancer which now so widely prevails. It is, therefore, the function of the society to collect and study this material and present it to the public through lectures, circulars, newspaper articles, etc., seeking in this effort the assistance of boards of health, women's clubs, nurses, social service workers, and all other appropriate educational forces, both national and local.

In pursuing its policy of statistical investigations, the society feels that it is filling a gap which would otherwise exist between studies of the official mortality records on the one hand and the results of experimental and clinical research on the other hand. The importance of the statistical approach to this problem is now always fully recognized. Many competent authorities believe that a comprehensive study of the factors of heredity, race, sex, age, and other conditions under which malignant tumors develop in the different organs and parts of the human mechanism, will throw an increasingly clear light on the etiology of the many forms of cancer. The relation of the hospital to such investigations is, of course, determined by the fact that cancer, perhaps more than any other disease of like prevalence and importance, is treated in the great majority of cases in institutions. It is one of the chief aims of the society, therefore, to promote such uniformity and standardization of hospital records as will enable the reports of all the leading institutions to be compared and their statistics massed for analysis, thus leading to sound conclusions based on great numbers of cases. To this end the society wishes to cooperate with movements for the standardization of histories and records as represented by the committees of the Clinical Congress of Surgeons and of the American Hospital Association.

In order to develop its statistical studies under the best technical surveillance, the society has appointed a statistical advisory board, consisting of some thirty prominent representatives of hospitals, research laboratories, insurance companies, and public health departments. A special committee has devised and is now putting into use a blank for the reporting and study of surgical treatment of cancer. This schedule has been purposely restricted to the fewest possible questions in order to induce large numbers of representative American surgeons to cooperate by filing reports of all their cases, both in hospital and private practice. It is possible for competent hospital clerks to fill out these blanks from the original records of the surgical services, and it is hoped that many of the larger hospitals may be willing to lend their direct assistance in this manner to this plan, which promises eventual results of great interest. The blank provides for follow-up inquiry from the central office of the society at least once a

year on each case recorded. The society hopes, therefore, for the establishment of adequate general follow-up work in every large hospital, which, through the agency of social service departments or other accepted methods, would insure keeping track of the after-history of cancer as well as other patients.

A second special committee has carried into effect the recommendation of the statistical advisory board that a study of the experience of the principal insurance companies be made with respect to the mortality from two selected forms of the disease. An elaborate blank has been prepared, and sent in the necessary quantities to all these companies, in order to obtain a wide range of detailed information regarding each death from cancer of the breast and cancer of the buccal cavity.

Still another set of blanks has been prepared for experimental use in one of the best equipped special cancer hospitals. These forms give opportunity for taking an original and record history of each case in such detail as regards all possible conditions bearing on the etiology of the disease that, if the use of the form could be made general, an enormous amount of information of the highest scientific value would undoubtedly result.

One of the first endeavors of the society was to promote the improvement of the national mortality statistics of cancer in order that it might become possible in this country to follow the example of the foremost English students in drawing important conclusions from the exceptionally detailed reports of the registrar-general of England and Wales. Prompt cooperation was forthcoming from the United States Census Bureau, and at the suggestion of the society a special report on the cancer mortality of the United States registration area in 1914 is now in press. This promises to be, perhaps, the most notable statistical report on this disease ever made by any government. For the first time the figures of deaths from cancer will be separated according to whether the diagnosis was based on clinical observation alone or was confirmed by autopsy, surgical intervention, or microscopical examination. The value of the report will be further enhanced by the separate statement of deaths according to twenty-nine different organs and parts affected, and with greater detail as to age, race, and sex than is possible in the regular annual mortality reports of the Census Bureau.

A word should be said about the opportunity of hospitals to cooperate in the direct educational work of the society. There is especial need for the adequate instruction of nurses regarding the early symptoms of cancer. Hospital training and experience gives the nurse only too great a chance to become familiar with cancer in its later and more depressing stages. The nurse seldom sees early cases in routine work; therefore hospitals should provide some special teaching of the early symptoms and danger signs, and of the duty of the nurses to urge immediate consultation with the family physician or surgeon, while avoiding any opinion or diagnosis of her own. It should be remembered that many patients, especially women, will ask a nurse about suspicious or unusual conditions when they would not think of calling a doctor about such apparently trivial matters. Every school of nursing has been asked to arrange appropriate instruction on this subject, and the society welcomes every chance to provide qualified speakers for nurses' meetings and special articles for their professional publications.

Hospitals can further assist by permitting and encouraging the display of wall charts and exhibits, and by the distribution of proper circulars in the appropriate dispensary services. It may be argued that in the assembling of

patients keenly interested in their bodily condition, and while they are waiting their turn for treatment, there is an exceptionally favorable opportunity to impress them in this manner with the general lessons of hygiene and, so far as may be possible, with the danger, the means of prevention, and the hope of cure of this ancient and dreaded enemy of the human race—cancer.

CURTIS E. LAKEMAN.

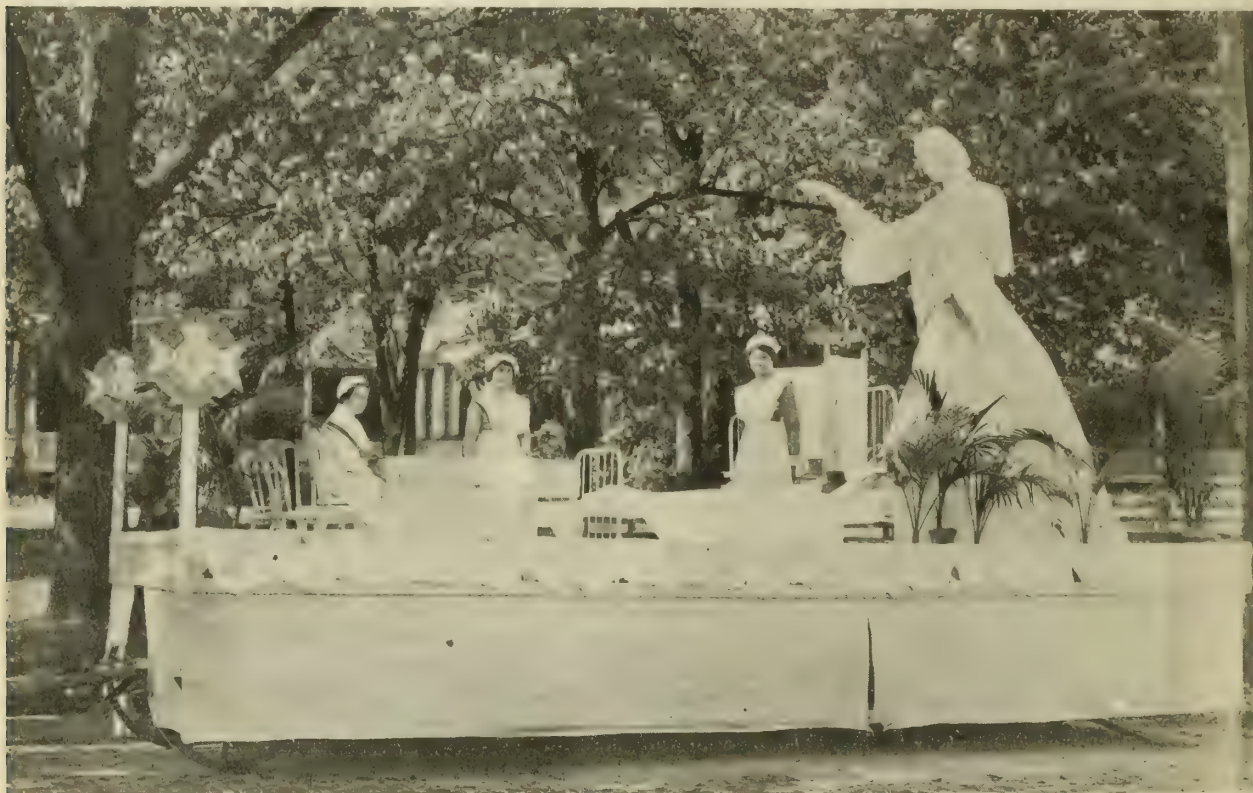
Float of the Battle Creek Anniversary Pageant

At the golden jubilee celebration of the Battle Creek Sanitarium, held on October 3, 4, and 5, the training school for nurses took a leading part. In the exhibition hall it had a model sick room and a booth. In this latter were displayed pictures of many classes. Since its opening in

Louis R. Curtis, Formerly of St. Luke's Hospital, Chicago, Makes a Change

Considerable interest has been aroused in medical circles by the announcement of the election of Mr. Louis R. Curtis, for eighteen years superintendent and secretary of St. Luke's Hospital, Chicago, as president of the F. S. Betz Company. It is stated that Mr. Frank S. Betz, the retiring president, continues with the company as chairman of the board of directors.

Mr. Curtis was born in 1865 in Philadelphia. He obtained his college training at Stevens, graduating as mechanical engineer. In 1889 he entered the hospital field as assistant superintendent of the New York Hospital. During that period he attended medical college, not with an idea of practicing, but to better fit himself for his hospital



Nurses' float, with 11-foot statue of Florence Nightingale, in the pageant of the golden jubilee celebration of the Battle Creek Sanitarium.

1888 the school has graduated over 1,300 persons, men and women. Several hundred nurses marched in the night pageant, led by a float which contained a statue of Florence Nightingale 11 feet tall, made of staff. At both performances of the morality masque, "The Triumph of Truth," the nurses appeared in a body, and on the closing night they presented to Mrs. Mary S. Foy, superintendent of the school, a wrist watch.

Miss Mary Trigg, superintendent of the Greenville Sanatorium, Greenville, Miss., was elected president of the Mississippi State Nurses' Association, which closed its annual convention at Natchez November 1. Other officers named were Miss Esther Mitchell, superintendent of the Vicksburg Infirmary, and Miss Jennie M. Quinn, superintendent of the Hattiesburg Hospital.

Additions recently made to the San Joaquin Hospital, Bakersfield, Cal., have increased the capacity of the institution one-third. Considerable new equipment, including an x-ray machine and a giant magnet, has been installed.

work. From the New York Hospital Mr. Curtis went to the General Hospital of Elizabeth, N. J., staying there for about one and one-half years. From there he came to St. Luke's Hospital, Chicago, as superintendent, and has been the dominating figure in that institution, both as superintendent and secretary, until recently, and is now vice-president in charge of the operation of the institution. During the last years Mr. Curtis has also been prominent as a consulting engineer, especially among hospitals, and has introduced many advanced and successful ideas in hospital construction and organization. His wide experience among hospitals and medical men, coupled with his technical training, makes him peculiarly well fitted for his new position.

Construction work on the Iverson Memorial Hospital Laramie, Wyo., is nearing completion. The building is three-story and basement fireproof structure, with a capacity of 35 beds. It is being erected by Edward Iverson, former president of the First National Bank of Laramie, as a memorial to his late wife.

[illegible]

Library Bureau Cat. no. 1137

